# SERVICE MANUAL PARTS LIST

MODEL GXC-730D

AUX AUX



#### AKAI CASSETTE DECK

# $\mathsf{MODEL}GXC\text{-}730D$

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#### SECTION 1

#### **SERVICE MANUAL**

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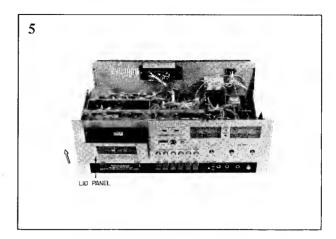
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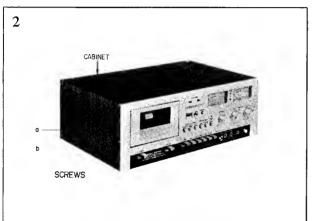
For basic adjustments, measuring methods, and operating principles, refer to GENERAL OPERATING PRINCIPLES AND ADJUSTMENTS.

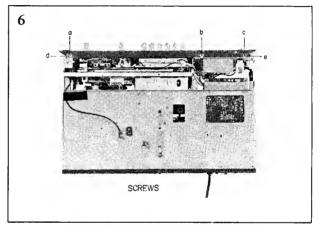
#### II. DISMANTLING OF UNIT

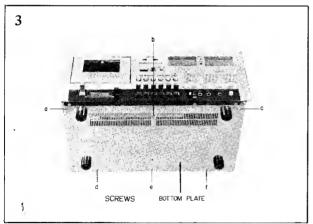
In case of trouble, etc. necessitating disassembly, please disassemble in the order shown in photographs. Reassemble in reverse order.

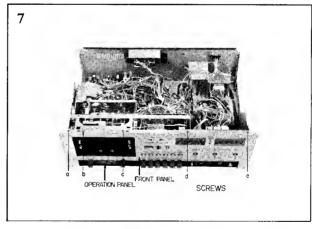


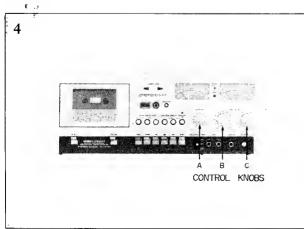


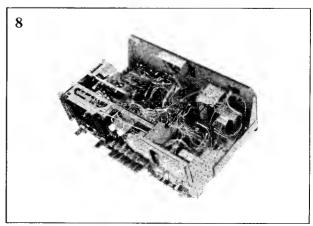












#### III. CONTROLS

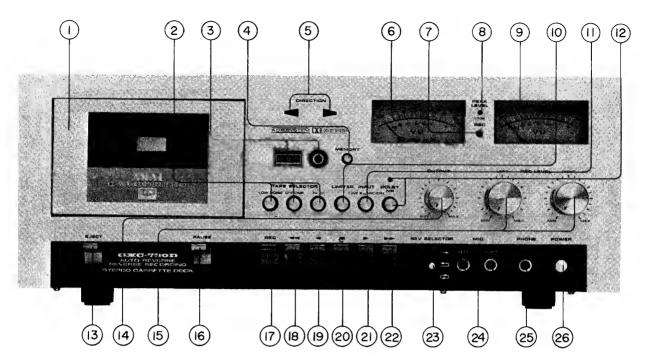


Fig. 1 Controls

- 1. CASSETTE RECEPTACLE LID (with tape view window)
- 2. TAPE SELECTOR SWITCHES
- 3. INDEX COUNTER AND RESET BUTTON
- 4. MEMORY WIND BUTTON
- 5. DIRECTION INDICATOR LAMPS
- 6. LEFT VU METER
- 7. RECORDING INDICATOR LAMP
- 8. PEAK LEVEL INDICATOR
- 9. RIGHT VU METER
- 10. LIMITER SWITCH
- 11. INPUT SELECTOR
- 12. DOLBY N.R. SWITCH AND INDICATOR LAMP
- 13. EJECT KEY

- 14. OUTPUT LEVEL CONTROL
- 15. RECORDING LEVEL CONTROLS (Left and right)
- 16. PAUSE KEY
- 17. RECORDING KEY
- 19. REVERSE PLAY ■ KEY
- 20. STOP ► KEY
- 21. FORWARD PLAY ► KEY
- 22. FAST FORWARD ►► KEY
- 23. REVERSE SELECTOR
- 24. MICROPHONE JACKS (Left and Right)
- 25. HEADPHONE JACK
- 26. POWER SWITCH

#### IV. PRINCIPAL PARTS LOCATION

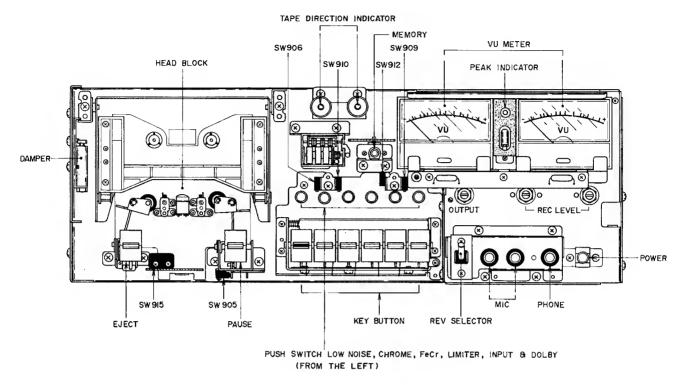


Fig. 2 Front View

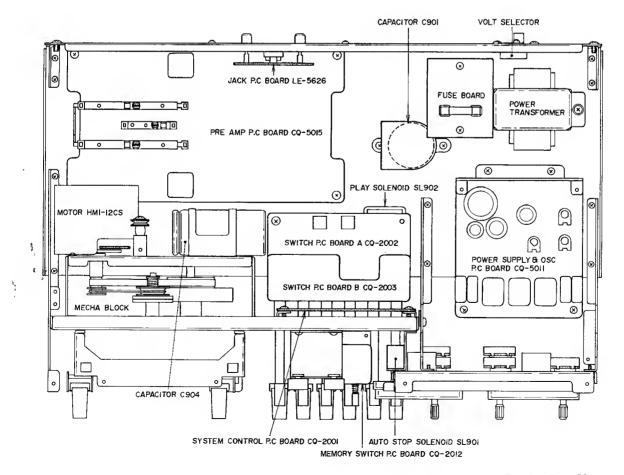
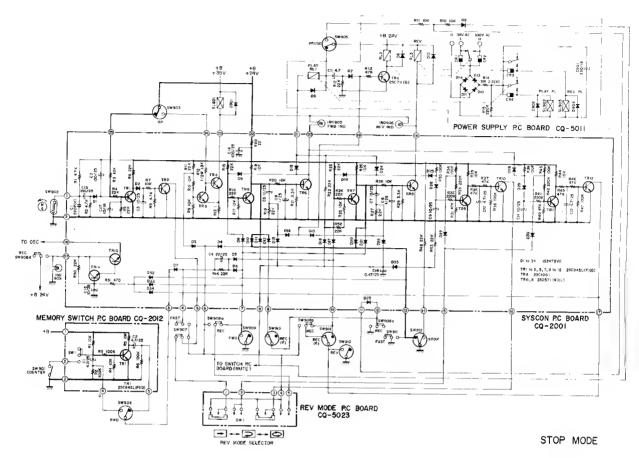


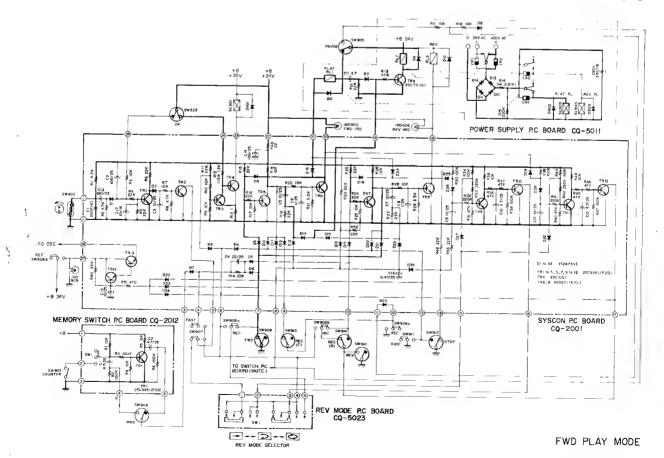
Fig. 3 Top View

#### V. CIRCUIT OPERATION

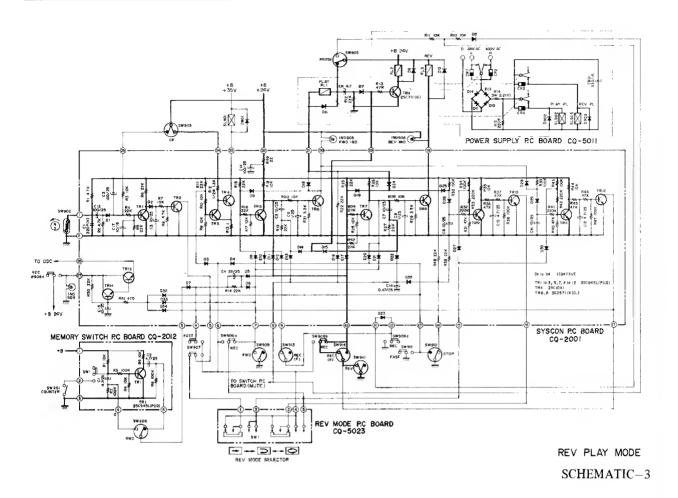
#### 1. SYSTEM CONTROL (SYSCON) OPERATION



#### SCHEMATIC-1



SCHEMATIC-2

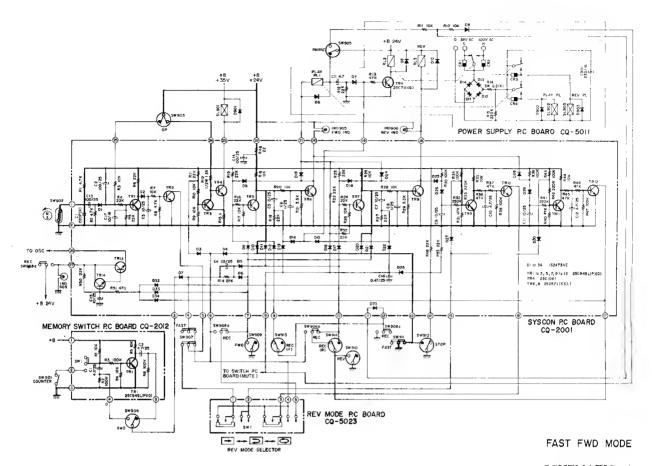


#### 1) Forward Playback (Refer to SCHEMATIC-2)

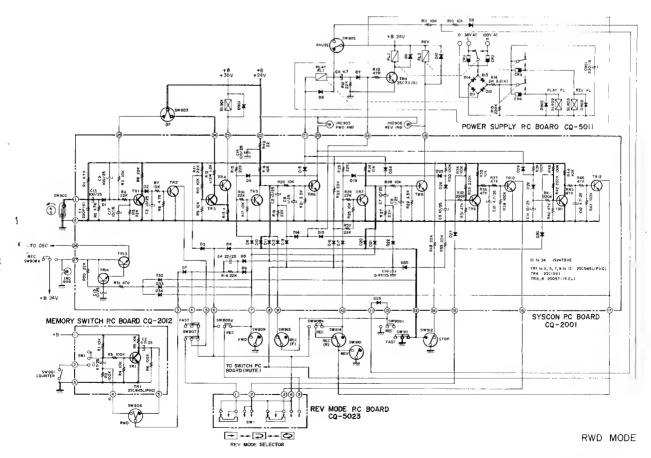
- a) When FWD key is depressed, FWD Switch (SW909) is grounded, TR5 base electric potential decreases and TR5 turns OFF. Base bias is supplied to TR6 through R18 and R20, and TR6 is turned ON.
- b) Immediately after the FWD button is depressed and SW909 is turned ON, SW909 returns to OFF condition. In order to hold TR6 at ON condition, TR5 base bias is supplied through D9 and TR6 and decreased to approximately the ground electric potential.
- c) Accordingly, FWD IND LAMP (IND 905) and RL1 operate because TR6 is ON. And because bias is supplied to TR4 base through C5, D14 (SYSCON P.C BOARD), and R13 (POWER SUPPLY P.C BOARD), TR4 is turned ON and RL2 operates.
- d) Also, until C5 is charged, a lead-in high voltage is supplied to the Play Plunger (SL902) and Play Plunger operates putting the deck into a FWD Playback mode.
- e) After C5 is charged, bias is not supplied to TR4 (POWER SUPPLY P.C BOARD) so that TR4 turns OFF and RL2 stops. Low voltage to hold is then supplied to Play Plunger (SL902) to maintain the FWD Playback mode.

#### 2) Reverse Playback (Refer to SCHEMATIC-3)

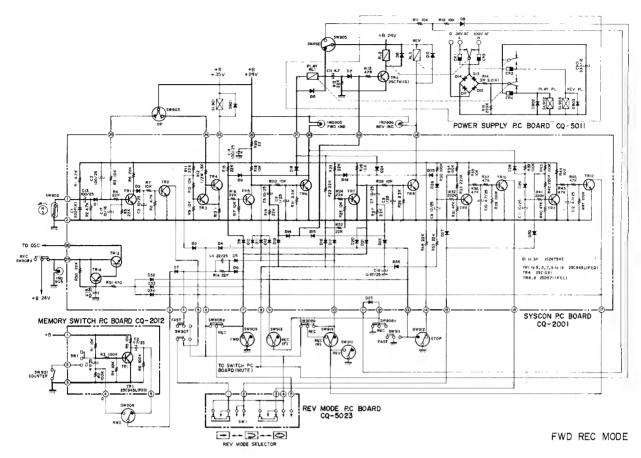
- a) By depressing the REV button, REV switch (SW910) is turned ON and TR7 base bias is decreased to about the same electric potential as ground so that TR7 is turned OFF. When TR7 is at OFF condition, TR7 collector voltage increases and base bias is supplied to TR8 through R26 and R28. TR8 is then turned ON.
- b) When TR8 is turned ON, REV IND LAMP (IND 906) and RL3 operate, and by the flow of the electric current through D24 and TR8, RL1 is turned ON.
- c) Of the circuits R13 (POWER SUPPLY P.C BOARD), D15 and C7 (SYSCON P.C BOARD), TR4 is turned ON and RL2 operates only during the charging time of C7.
- d) Accordingly, REV Playback mode is achieved by RL1, RL2, and RL3 operation through the workings of Play Plunger (SL902) and REV Plunger (SL903).
- e) SW910 returns to OFF immediately after the REV button is depressed. In order to hold TR8 at ON, TR7 base bias is decreased to near ground electric potential through R23 and D14.



#### SCHEMATIC-4



SCHEMATIC-5



#### SCHEMATIC-6

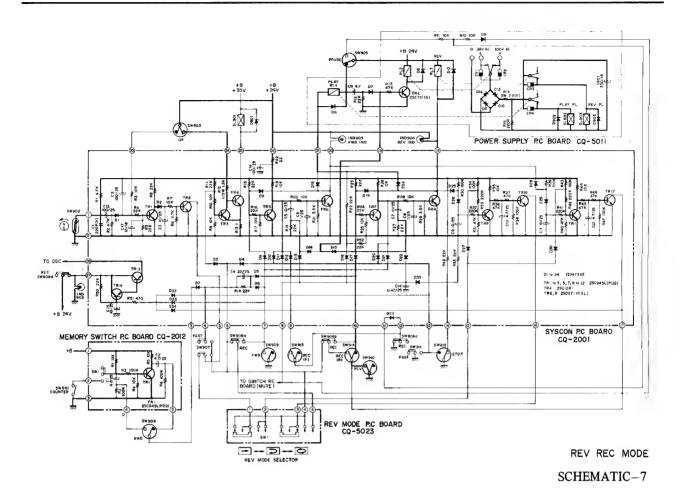
#### 3) Fast Forward and Rewind

#### (Refer to SCHEMATIC-4, 5)

- a) Fast forward and rewind modes are mostly mechanically operated.
- b) Bias is supplied to TR1 base through D1 and R4 by charge/discharge of C13 and TR1 is thereby turned ON. On the other hand, TR2 base electric potential is decreased to near ground electric potential through TR1 and is turned OFF.
  - c) Because SW903 is turned ON, voltage is regularly supplied to TR3 base through R10 and R11, and TR3 is turned ON. Consequently, TR4 base electric potential is decreased to near ground electric potential, TR4 is turned OFF, and Stop Plunger maintains OFF condition.
  - d) Since TR6 and TR8 base electric potentials are decreased to near ground electric potential because SW911 is ON, TR6 and TR8 is turned OFF, and RELAY, PLUNGER, etc. maintains OFF condition.

#### 4) Forward REC (Refer to SCHEMATIC-6)

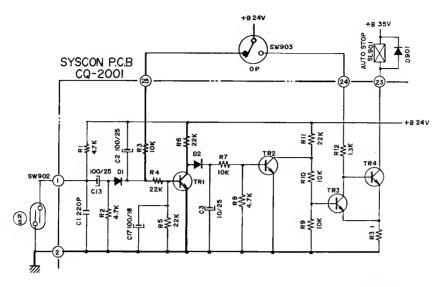
- a) When Rec and Forward keys are depressed (SW903, SW909, SW913, SW914, SW908 a,b,c, and d are ON), REC LAMP (IND 909), TR13 and TR14 are turned ON due to SW908d and +B is supplied to the OSC circuit to start OSC circuit operation.
- b) Since Forward key is also depressed, items 1) to 5) under Forward Play condition is also achieved to bring the deck into FORWARD REC MODE.



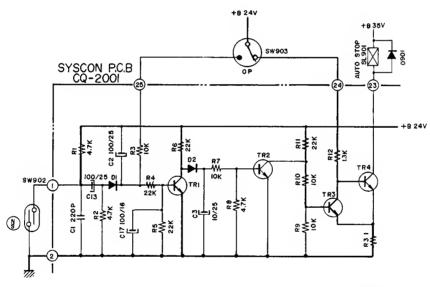
#### 5) Reverse REC (Refer to SCHEMATIC-7)

- a) When Rec and Reverse keys are depressed, SW903, SW910, SW913, SW914, SW908 a,b,c and d are turned ON. Rec LAMP (IND 909), TR13, and TR14 are turned ON when SW908d is turned ON and +B is supplied to OSC circuit to operate OSC circuit.
- b) At the same time, REV key is depressed so that the conditions in items a) to e) under REV Play occurs simultaneously to achieve REV REC MODE.

#### 2. AUTOMATIC STOP OPERATION



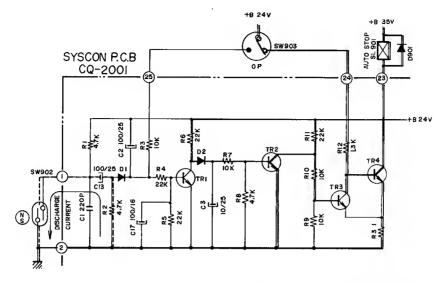
SCHEMATIC-8



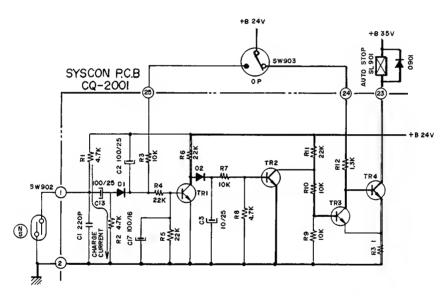
SCHEMATIC-9

#### 1) During Tape Travel (Refer to SCHEMATIC-9)

- a) When tape is traveling (condition at which tape counter rotates), the magnet rotates and the Reed switch is at ON-OFF condition.
  - b) When the Reed switch is turned ON and OFF, C13 is repeatedly charged/discharged and the AC signal is generated on the anode side of D1. This AC signal is rectified at D1 and smoothed at C2 and becomes the base bias of TR1.
- c) Accordingly, TR1 maintains ON condition, and TR2 turns OFF because TR2 base is inverse biased through D2.
- d) Also, TR3 is turned ON by a supply of forward bias, and TR4 base electric potential is decreased through TR3. Since this maintains OFF condition, STOP PLUNGER (SL901) does not operate.



SCHEMATIC-10



SCHEMATIC-11

# 2) When Tape Travel Stops with Reed switch ON (Refer to SCHEMATIC-10)

- (a) When the tape travel is stopped with the Reed switch at ON condition, the electric charge charged at C13 is discharged through Reed switch and R2.
- b) Accordingly TR1 is turned OFF because the AC signal generated on the anode side of D1 stops. When TR1 is turned OFF, TR1 collector electric potential increases and bias is supplied to TR2 to turn ON TR2.
- c) When TR2 is turned ON, TR3 base electric potential decreases and TR3 is turned OFF. At the same time, base bias is supplied to TR4 and TR4 is turned ON.
- d) Because TR4 is turned ON, STOP PLUNGER (SL901) operates and STOP mode is effected.
- e) By the STOP PLUNGER operation, SW903 is turned OFF. This causes flow of base bias to

- TR1 through SW903, R3 and R4 and subsequently TR is turned ON.
- f) As a result, TR1 is turned ON and TR2, TR3, and TR4 are turned OFF as shown in SCHEMATIC-10. STOP PLUNGER is thereby released. (The release occurs in extremely short period.)

# 3) When Tape Travel Stops with Reed Switch OFF (Refer to SCHEMATIC-11)

- a) When the tape travel is stopped with the Reed Switch at OFF condition, charge current begins to flow through R1→C13→R2 to C13.
- b) While charge current is flowing to C13, voltage is generated on both sides of R2. But when charging of C13 is completed, voltage is not generated.
- c) Same as Item 2) b) to f).

### 3. REV MODE SELECTOR OPERATIONS (Refer to SCHEMATIC-2, 3)

# 1) ONE-WAY (FWD OR REV) PLAYBACK MODE ( ) OPERATION

- a) In the \_\_\_ mode, terminals ① ③ ④ on REV MODE P.C BOARD (CQ-5023) are connected.
- b) When the tape stops at the end, TR1 is turned OFF because bias is not supplied to TR1 base. At the same time, due to the increase of TR1 collector voltage, base bias is supplied to TR2 and TR2 is turned ON.
- c) When TR2 is turned ON, TR3 base bias is decreased to about the same electric potential as ground through R1, D3 and TR2, and thereby TR3 is turned OFF. Accordingly, TR3 collector voltage increases, base bias is supplied to TR4, and TR4 is turned ON.
- d) Stop Plunger (SL901) operates and AUTO-MATIC STOP is effected when TR4 is turned ON.

#### 2) ONE CYCLE FWD OR PLAYBACK MODE

( ) OPERATION

- a) In the mode, REV MODE P.C BOARD (CQ-5023) terminals from and and are connected as well as from and 4.
- b) When the tape stops after FWD PLAYBACK, TR1 is turned OFF because bias is not supplied to TR1 base. At the same time, due to the increase of TR1 collector voltage, base bias is supplied to TR2 and TR2 is turned ON.
- c) When TR2 is turned ON, TR11 base bias is decreased to about the same electric potential as ground through R43, D30, and TR2 as well as through R39, D28, and TR6. This turns TR11 OFF. TR12 is then turned ON because base bias is supplied to TR12 through R45 and R46 when TR11 is turned OFF.
- d) TR7 is turned OFF because TR7 base bias is decreased to near ground electric potential by means of R23, D17, SW908b, and TR12 when TR12 is turned ON. Then a base bias is supplied to TR8 through R29 and R28, and TR8 is turned ON. Likewise, TR6 is turned OFF because TR6 base bias is decreased to near ground electric potential by means of R18, D11 SW908b, and TR12 when TR12 is turned on. This release FWD PLAY mode.
- e) Since TR8 is turned ON, REV PLUNGER operates and REV PLAY starts.
- f) When the tape stops at the end of REV PLAY, TR1 is turned OFF because base bias supply to TR1 is stopped and TR2 is turned ON because base bias is supplied to TR2.
- g) TR9 base bias is decreased to about the same electric potential as ground through R34, D27, and TR2 as well as R30, D25, and TR8 when TR2 is turned ON. As a result, TR9 is turned OFF. On the other hand, base bias is supplied to TR10 through R35, R36, and R37, and

TR10 is turned ON.

h) When TR10 is turned ON, TR3 base bias is decreased to near ground electric potential through R11, D3, and TR10. As a result TR3 is turned OFF and TR4 is turned ON. Stop Plunger (SL901) operates and STOP mode is effected when TR4 is turned ON.

#### 3) CONTINUOUS PLAYBACK MODE

( ) OPERATION

- a) In the mode, REV MODE P.C BOARD (CQ-5023) terminals from and are connected as well as from and .
- b) Because REV MODE P.C BOARD (CQ-5023) terminal ④ is OPEN, base bias is continuously supplied to TR3. Therefore, TR3 and TR4 are always ON and, thus, STOP PLUNGER does not operate in the mode.
- c) The operation as deck changes from FWD to REV and until the end of REV condition is the same as the operation described in items b) to g) under [ mode.
- d) When TR10 is turned ON, TR8 base bias is decreased to about the same electric potential as ground through R26, D21, and SW908a. So TR8 is turned OFF and REV PLAY stops.
- e) TR5 base bias is also decreased to near ground electric potential through R15, D8, SW908a, and TR10, and TR5 is turned OFF when TR10 is turned ON. At the same time, base bias is supplied to TR6 through R18 and R20, and TR6 is turned ON. FWD PLAY starts.
- f) Therefore, when REV MODE P.C BOARD SWITCH SW1 is set to □ , continuous PLAY: FWD→REV→FWD can be accomplished.

#### 4. MEMORY OPERATION

The tape counter includes a switch that makes contact when the tape counter indicator reaches "900" and separates when the indicator reaches "000". The deck can automatically enter STOP mode from Fast Forward or Rewind. If FF and REV keys are depressed together, the deck can enter REV mode from Fast forward. If Rewind and Forward keys are depressed together the deck can enter Forward mode from Rewind.

#### 1) Fast Forward-STOP Operation

(Refer to SCHEMATIC-1, 4)

- a) When the tape counter indicator reaches "900" during Fast Forward mode, the switch (SW901) within the tape counter is turned ON, and TR1 is turned OFF because TR1 base bias is decreased to near ground electric potential through SW901.
- b) Accordingly, TR1 collector voltage increases and electric charge current starts to flow to C2 through R5. (C2 is charged in extremely short period).

- c) The switch (SW901) within the tape counter turns OFF at the moment the counter indicator reaches "000" during Fast Forward.
- d) As SW901 is turned OFF, charge current starts to flow into C1 and completes its charge in a short period. The electric potential between C1 and R1 increases, bias is supplied to TR1 base, and TR1 is turned ON.
- e) At the instant TR1 is turned ON, the electric charge that was charged to C1 during the time TR1 was OFF starts to discharge through TR1 and R6.
- f) Accordingly, the electric potential between C2 and R6 decreases and as the anode sides of D3 and D7 (SYSCON P.C BOARD) are minus biased, TR3 is turned OFF and TR4 is turned ON so that the STOP PLUNGER operates.
- g) The Fast Forward key lock is released when the Stop Plunger operates and the deck goes into a STOP mode.

#### 2) Rewind-Stop Operation

#### (Refer to SCHEMATIC-1, 5)

- a) In the Rewind mode, C1 is charged through R1→C1→R2 and TR1 is turned ON because base bias is supplied to TR1 through R1→R3.
- b) At the moment the tape counter indicator decreases to "000" as rewind takes place and reaches "999", the switch (SW901) within the tape counter makes contact and the electric charge charged to C1 starts to discharge through R2.
- c) When discharge begins at C1, the voltage between C1 and R2 gradually decreases, the anode sides of D3 and D7 (SYSCON P.C BOARD) are minus biased, and TR3 (SYSCON P.C BOARD) is turned OFF. TR4 (SYSCON P.C BOARD) is then turned ON and STOP PLUNGER operates.
- d) The rewind key lock is released when STOP PLUNGER operates and the deck goes into a STOP mode.

#### 3) Rewind-Forward Play Operation

#### (Refer to SCHEMATIC-2, 5)

- a) Same as Rewind-Stop operation 1) to 6).
- b) In Rewind-Forward Play operation, since Rewind and Forward keys are both depressed, Rewind key is released before Forward key mechanically when Stop Plunger operates. Therefore, Forward Play can be effected from Rewind mode.

#### 4) Fast Forward→Reverse Play Operation

#### (Refer to SCHEMATIC-3, 4)

- a) Same as Fast Forward→Stop Operation 1) to 3).
- b) In Fast Forward→Reverse Play Operation, since Fast Forward and Reverse keys are both depressed, Rewind key is released before

Reverse key mechanically when the stop plunger operates. Therefore, REV Play can be effected from Fast Forward mode.

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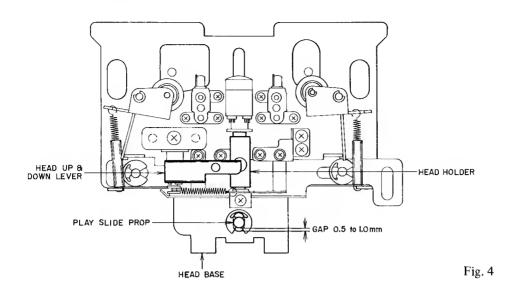
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#### VI. MECHANISM ADJUSTMENT



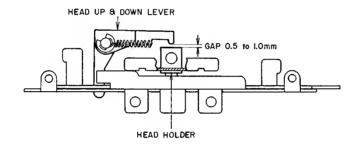
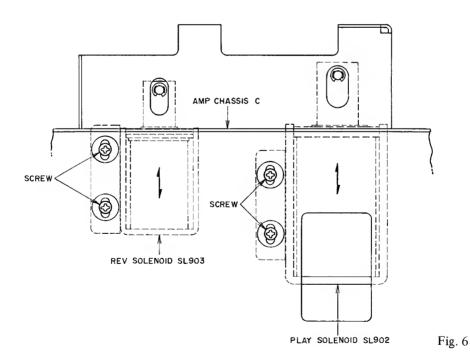


Fig. 5



# 1. PLAY SOLENOID INSTALLATION POSITION ADJUSTMENT

(Refer to Figs. 4, 5)

Set deck to playback mode and adjust position of play solenoid (SL902) shown in Fig. 5 so that the gap between the oval hole and play slide prop is 0.5 to 1.0 mm as shown in Fig. 4.

# 2. REVERSE SOLENOID INSTALLATION POSITION ADJUSTMENT

(Refer to Figs. 5, 6)

Set deck to reverse playback mode and adjust position of reverse solenoid (SL903) shown in Fig. 5 so that the gap between the head up and down lever and head holder is 0.5 to 1.0 mm as shown in Fig. 5.

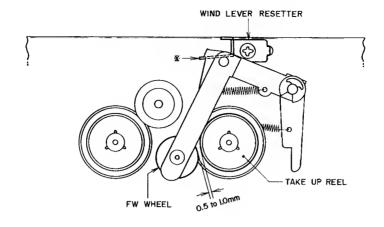


Fig. 7

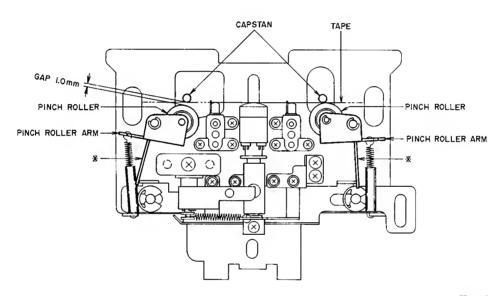


Fig. 8

# 3. FW WHEEL INSTALLATION POSITION ADJUSTMENT (Refer to Fig. 7)

A'djust by bending the part of wind lever resetter marked \* in Fig. 7 so that at stop mode, the gap between FW Wheel and Take-up Reel is 0.5 to 1.0 mm.

# 4. PINCH ROLLER AND CAPSTAN GAP ADJUSTMENT (Refer to Fig. 8)

At FWD playback mode the left pinch roller separates from the capstan, and at REV playback mode, the right pinch roller separates from the capstan. Bend the part of left and right pinch roller arm marked \* in the figure so that when the appropriate pinch roller separates from the capstan, the gap between the pinch roller and capstan is 1.0 mm at each respective mode.

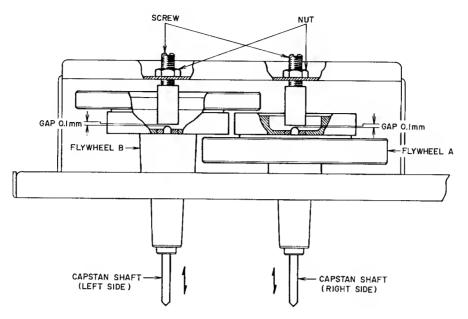


Fig. 9

# 5. CAPSTAN SHAFT LOOSE PLAY ADJUSTMENT (Refer to Fig. 9)

Adjust screws and tighten nuts at point at which when the capstan shafts are moved in the directions indicated by the arrow marks in the figure, capstan loose play is 0.1 mm.

1 ~

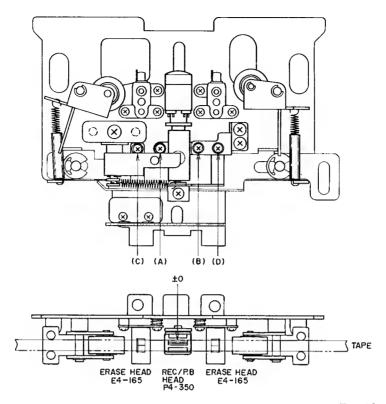


Fig. 10

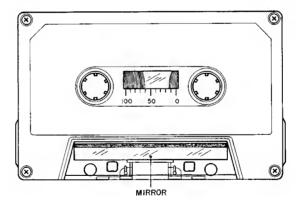


Fig. 11

#### Recording/Playback Head (P4-350) Alignment (Refer to Fig. 10)

Step	Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Remarks
1	Recording/Playback Head Height	4 track 1 kHz 0 VU recorded test tape	FWD PLAY	(A)	Maximum output, both channels. (Refer to Note 1)
2	Recording/Playback Head Azimuth	10 kHz recorded test tape	FWD PLAY	(C)	Maximum output, both channels.
3	Recording/Playback Head Height	4 track 1 kHz 0 VU recorded test tape	REV PLAY	(B)	Maximum output, both channels. (Refer to Note 1)
4	Recording/Playback Head Azimuth	10 kHz recorded test tape	REV PLAY	(D)	Maximum output, both channels.

Chart-1

- NOTES 1. When a 4 track, 1 kHz 0 VU recorded test tape is not available, for head height adjustment, use a cassette pack in which a mirror has been installed as shown in Fig. 11, and adjust head height adjustment screw until the edge of the head core and the edge of the tape are even.
  - 2. Be sure to demagnetize the heads with a Head Demagnetizer before and after head adjustment.

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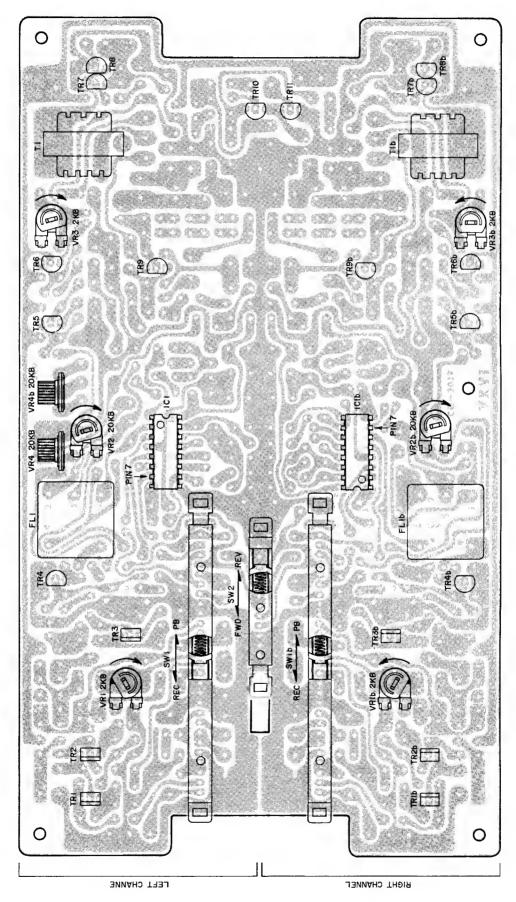


Fig. 12 Pre Amp P.C Board CQ-5015

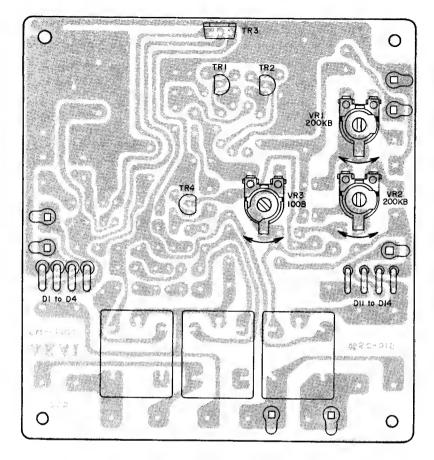


Fig. 13 OSC & Power Supply P.C Board CQ-5011

Step	Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Result	Remarks
1	Level of Dolby N.R. IC Pin 7	333 Hz 0 VU test tape	FWD PLAY	VR1 2 kB	-5.5 dBm (410 mV)	
2	Line Output level	333 Hz 0 VU test tape	FWD PLAY	VR2 20 kB	0 ± 0.5 dBm (0.775V)	
3	VU Meter Sensitivity	333 Hz 0 VU test tape	FWD PLAY	VR3 2 kB	0 VU	
4	Recording level (low noise tape)	Low noise blank tape, 1 kHz 0 VU recording	FWD REC	VR4 20 kB	0 ± 0.5 dBm (0.775V)	
5	Recording level (Chrome tape)	Chrome blank tape, 1 kHz 0 VU recording	FWD REC		−3 ± 1.5 dB	Confirmation only
6	Recording level (ferri-chrome tape)	Ferri-Chrome blank tape, 1 kHz 0 VU recording	FWD REC		0 ± 0.5 dBm (0.775V)	Confirmation only
7	Frequency Response (low noise tape)	Low noise blank tape, 1 kHz, 10 kHz -20 VU recording	FWD REC	VR1 200 kB (left ch) VR2 200 kB (right ch)	1 kHz, 10 kHz flat response	
8	Distortion Factor (Chrome tape)	Chrome blank tape, 1 kHz 0 VU recording	FWD REC	VR3 100B	Distortion minimum	

Chart-2

NOTES 1. The adjustments shown above are all at FWD mode. Adjustments at REV mode are not necessary, but confirmation of each step at REV mode should be made.

2. Adjustments should be made with Limiter, Dolby N.R., and Memory Switches at OFF position.

3. Output Control should be at maximum.

4. Tape Selector should be set to LOW NOISE position except when otherwise specified.

5. Use only the tape recommended for each adjustment.

Low Noise Tape:

Fuji FL C-60

Chrome Tape:

BASF CHROME DIOXIDE C-60

Ferri-chrome Tape:

Sony DUAD C-60

#### IX. DC RESISTANCE OF VARIOUS COILS

Part	Designation	DC Resistance
Motor	HM1-12CS	Between YLW-BLU 205 ohms Between BLU-RED 186 ohms Between RED-YLW 193 ohms
Oscillation Coil	OT-925	Between 1–3 0.3 ohms Between 4–6 1.5 ohms Between 7–9 6.1 ohms
Headphone Transformer	N19-349S	Primary 160 ohms ±15% Secondary 0.64 ohms ±15%
Play Solenoid	1660PHT3	700 ohms ±10%
Reverse Solenoid	1240PHT	600 ohms ±10%
Auto Stop Solenoid	0730THT1	15 ohms ±10%
Relay	LC1-C-JT DC24V	1,140 ohms ±10%
Recording/Playback Head	P4-350	180 ohms
Erase Head	E4-165	2.5 ohms

Chart-3

#### X. CLASSIFICATION OF VARIOUS P.C BOARDS

#### 1. RELATION OF P.C BOARD TITLE AND IDENTIFICATION NUMBER

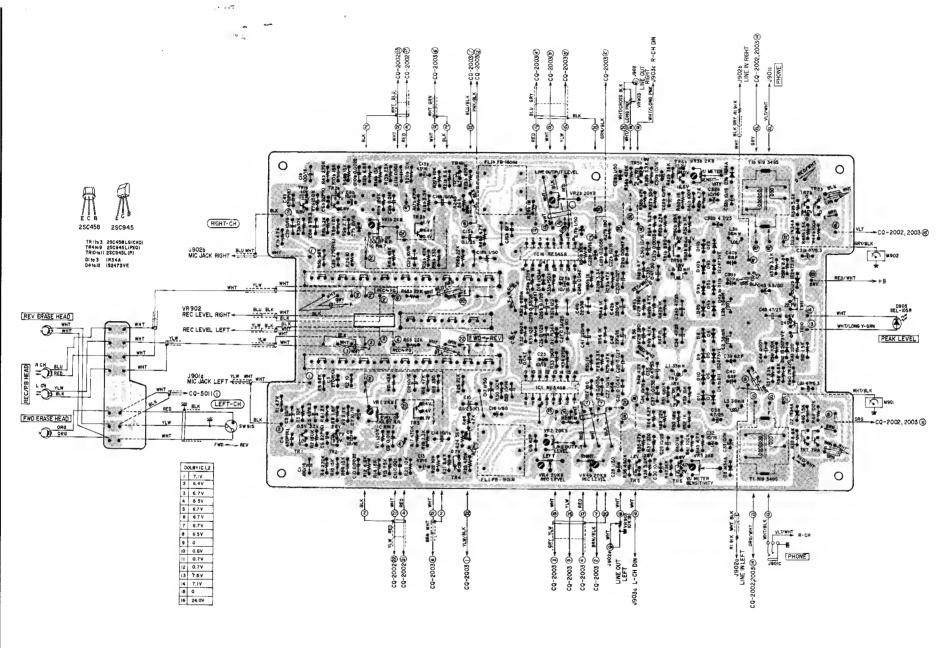
P.C Board	Number of P.C Board
Pre Amp P.C Board	CQ-5015
Relay P.C Board	CQ-0015
Power Supply, OSC P.C Board	CQ-5011
Switch P.C Board A	CQ-5002
Switch P.C Board B	CQ-5003
Jack P.C Board	CQ-5034
Rev Mode P.C Board	CQ-5023
System Control P.C Board	CQ-2001
Memory Switch P.C Board	· CQ-2012
Lamp P.C Board B	CQ-5022
Lamp P.C Board	CQ-1076
LED P.C Board	CQ-5021

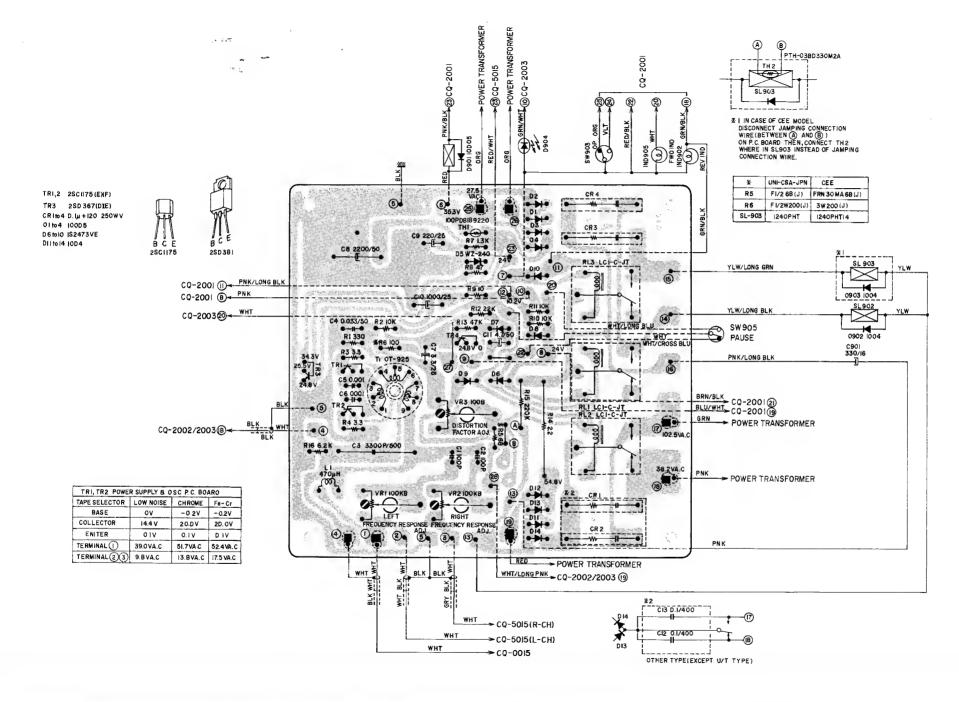
Chart-4

#### 24

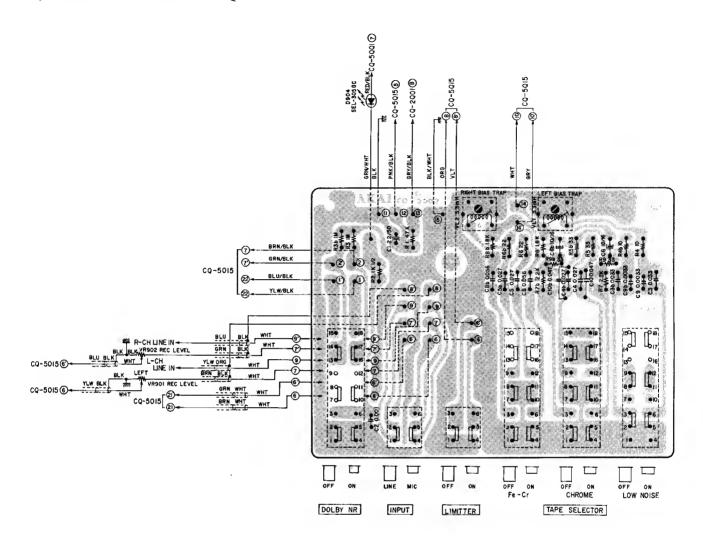
# . COMPOSITION OF VARIOUS P.C BOARDS

# PRE AMP P.C BOARD CQ-5015 and RELAY P.C Board CQ-0015

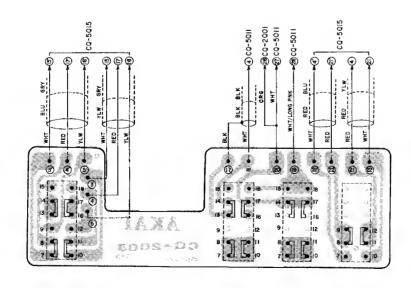




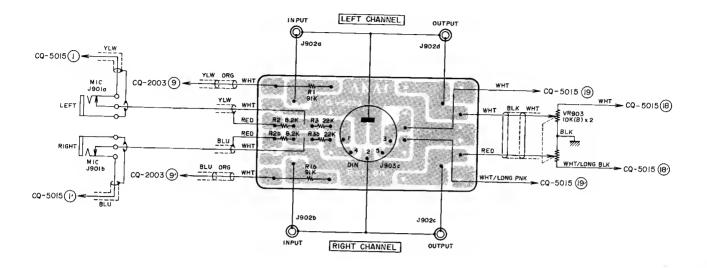
#### 3) SWITCH P.C BOARD A CQ-5002



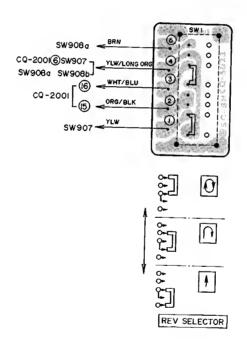
#### 4) SWITCH P.C BOARD B CQ-5003



#### 5) JACK P.C BOARD CQ-5034



#### 6) REV MODE P.C BOARD CQ-5023



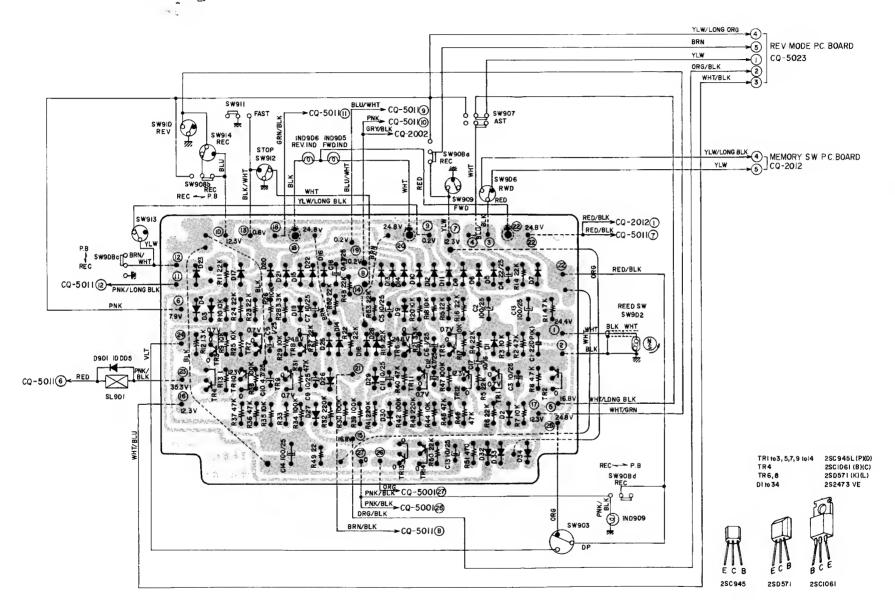
# RTV servis Horvat

Kešinci, 31402 Semeljci

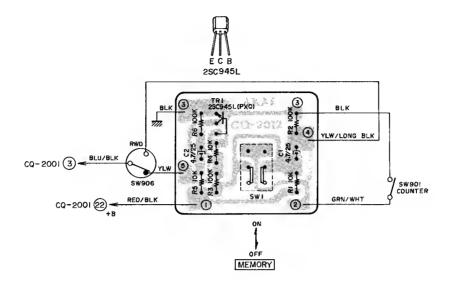
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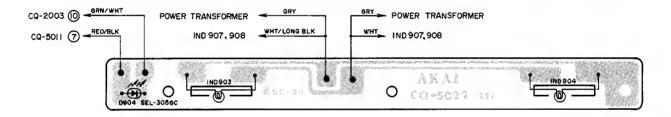
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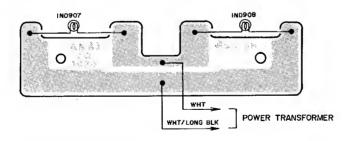
#### 8) MEMORY SWITCH P.C BOARD CQ-2012



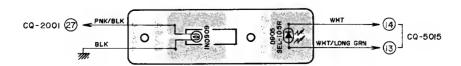
#### 9) LAMP P.C BOARD B CQ-5022



#### 10) LAMP P.C BOARD CQ-1076



#### 11) LED P.C BOARD CQ-5021



# SECTION 2

The Art Art Market April 1

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# PARTS LIST

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7.	PLUNGER BRACKET BLOCK 42
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10.	MECHA FRAME BLOCK (2)
11.	MECHA FRAME BLOCK (3)
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14,	FINAL ASSEMBLT BLOCK
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ND	2.4.0000 Min 2.4.2.000 A 2.4.00 Min 2.4.00

Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

#### HOW TO USE THIS PARTS LIST

- 1. This parts list is compiled by various individual blocks based on assembly process.
- 2. When ordering parts, please describe parts number, serial number, and model number in detail.
- 3. How to read List

The reference number corresponds with illustration or photo number of that particular parts list. This number corresponds with the Figure Number.

This number corresponds with the individual parts index number in that figure.

-A small "x" indicates the inability to show that particular part in the Photo or Illustration. Schematic Diagram Number of individual

manufactured part. (not required for parts order) Quantity of particular part required. Schematic Q'ty Ref. Parts No. Description

	FLYWH	EEL BLOCK #13		
12-115x	800425	Flywheel Block Assy. Comp.	RDG #13	1
12-116	244506	Flywheel Only	RD-233	1
12-117x	244754	Felt, Flywheel	RD-275	1
12-118	251324	Main Metal Case	RI)-236	1
12-119	253080	Main Metal	RD-237	1

- 4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of Components of the Schematic Diagram or Service Manual.
- 5. Please utilize separate "Common List for Service Parts" for Resistor Parts orders.
- 6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
- 7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.
  - It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
- 8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.
- CAUTION: 1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
  - 2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
  - 3. Because parts number and parts unit supply in the Preliminary Service Manual (Basic Parts List) may be partially changed, please use this parts list for all future reference.

#### 1. RECOMMENDED SPARE PARTS LIST

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

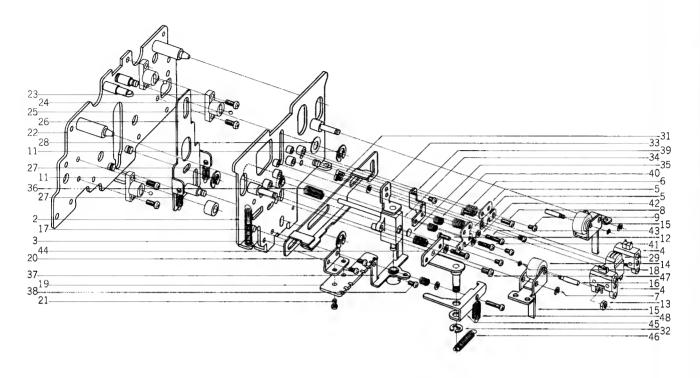
Parts No.	Description	Note
BA211746	SW P.C Board Comp. CQ-2002, CQ-2003	
BA211768	Syscon P.C Board Comp. CQ-2001	
BA211803	Memory SW P.C Board Comp. CQ-2012	
BA211972	Pre Amp P.C Board Comp. CQ-5015	
BA211994	Power Supply & OSC P.C Board Comp. CQ-5011	Switchable
BA235552	Power Supply & OSC P.C Board Comp. CQ-5011	CEE model
BA235563	Power Supply & OSC P.C Board Comp. CQ-5011	CSA model
BA235574	Power Supply & OSC P.C Board Comp. CQ-5011	JPN model
BA212040	Reverse Changing P.C Board Comp. CQ-5023	
BC219453	Wood Frame CQ-6008	
BD211634	Operation Panel Block Comp.	
BD211645	Front Panel Block Comp.	
BD681491	Lid Panel Block Comp.	Same as GXC-740D, 760D
BF217754	Flywheel A CQ-1072	
BF217765	Flywheel B CQ-1073	
BL211713	Take-up Lever Block Comp.	
BM211792	Motor (HM1-12CS) Block Comp.	
BR211691	Take-up Reel Table Block Comp.	
BR211702	Supply Reel Table Block Comp.	
BS218812	Keyboard SW Block Comp CQ-2045	
BT230984	Power Transformer CQT-1	T901 Switchable model
BT232165	Power Transformer CQT-3	T901 CEE model
BT232143	Power Transformer CQT-2	T901 CSA, JPN model
BZ210396	Clutch Block Comp.	Same as GXC-740D
BZ211904	Pause Button Block Comp.	
ED656357	Luminous Diode SEL-105R	D905
ED656346	Luminous Diode SEL-305GC	D904
E1605013	1C NE545B	
1 EL231265	Lamp (Cord Type) 24V 35mA	IND905, 906, 903, 904
EL295312	Lamp (L/T) 8V 0.2A	IND907, 908
EM234134	VU Meter KL-250L-10	M901, 902
EO669734	MPX Filter FB1801M	FL1
EP494425	Plunger Solenoid 0730THT1	SL901
EP638706	Plunger Solenoid 1660PHT-3	SL902
EP638695	Plunger Solenoid 1240PHT	SL903
EP616500	Relay LC1-C-JT DC24V	RL1, 2, 3
ES488970	Slide Switch SL-242B4BF	SW907
ES477966	Micro Switch SS-5GL	SW903, SW914, SW913
ES516036	Reed SW ORD-225	SW902
E <b>S</b> 494188	Micro Switch SS-5GL-13	SW905

Parts No.	Description	Note
ES422414	Slide SW SL-242B4BD	SW908
ES665875	Push SW SDG-1P J TV-3 U/L	CSA and Switchable model
ES665807	Push SW SDG-5P 4A/32A 250V AC	CEE model
ES677305	Lever SW SLE54305	SW1
ET666404	Transistor 2SD571 (K) (L)	
EV691468	Vol VJ10R670 50 kA	VR901, 902
EV231017	Single axial 2 throw Vol. GJ70R526 10 kBx2	VR903
HE636963	Erase Head E4-165	Same as GXC-740D, 760D, 570D, 325D
HP571983	Rec/PB Head P4-350	Same as GXC-75D
MB217776	Capstan Belt CQ-1074	
MB666123	Drive Belt CA-1100	Same as GXC-710D
MB217787	Counter Belt CQ-1075	
MC213085	Counter SMP-390-98	
MP468292	Pinch Roller CG-0032	Same as GXC-710D, 75D
SK631056	Single Knob MY-6208	Rec Level Knob
SK219497	Single Knob CQ-6009	Output Knob
SK634410	Push Button Knob J 91-5051	

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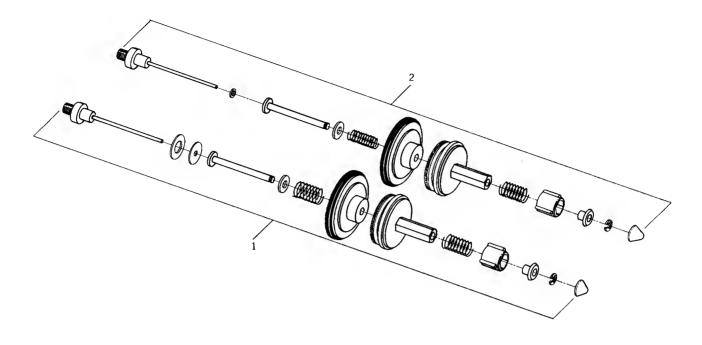
#### 2. ILLUSTRATION OF HEAD BASE BLOCK



#### 2) HEAD BASE BLOCK

Ref. No.	Parts No.	Description	Schematic C	)'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
	HEAD BAS	E BLOCK			2-27	ZG216483	Head Base Spring	CQ-0013	2
2-1 x	BH286637	Head Base Block Comp.	CQ-9806A-F	1	2-28	ZW374545	Washer (PBP) D5.1×10.3×0.4t		1
2-2	HZ268784	Head Base Part CQ	CQ-0001	1	1				
2-3	TC216382	Changing Slide	CQ-0008	1		HEAD BLO	CK		
2-4	HE636963	ERASE HEAD E4-165 CW		2	2-29	HP571983	REC/PB HEAD P4-350		1
2-5	HZ567202	Erase Head Plate	CP-0029	2	2-30 x	ZS300626	Screw, pan head 2x2.5		
2-6	ZG227114	EH Adjust Spring	CA-0214	2			(Camera Standard)		2
2-7	ZW270088	'E' Ring 1.9M	6-1-9	4	2-31	ZS399148	Screw, countersunk head 2x3		1
2-8	ZS356861	Screw, pan head 2x6		2	2-32	ZW270101	'E' Ring 3M	6-1-9	3
2-9	ZS477876	Screw, pan head 2×3		4	2-33	HZ294524	Head Mt. Base (A) Part CQ	CP-0025	1
2-10x	<sup>4</sup> ZS417161	Screw, pan head 2.3×4		2	2-34	EZ696431	Head Holder Part CP	CP-0019	1
2-1,1	ZW290283	'U' Ring 2.85M	6-1-1	7	2-35	ZW567630	Up & Down Washer	CP-0017	1
2-12	ZS201936	Screw, binding head 2.3×6		2	2-36	ZG300828	Hold-down Spring (2)	CQ-0023	1
2-13	ZW699052	Nut, M2.3 D2.3x5x2.3t		2	2-37	ML683594	Azimuth Lever Part CP	CP-0023	1
2-14	MP468292	Pinch Roller, CG D=13	CG-0032	2	2-38	ZS375107	Screw, pan head 2.6×4		1
2-15	ML216393	Pinch Roller Arm CQ	CQ-0009	2	2-39	HZ567213	Adjust Base	CP-0031	1
2-16	MS389981	Pinch Roller Shaft	CS-0011	2	2-40	ZG402895	CS Angle Adjust Spring	CS-0024	2
2-17	ZG216494	P Spring	CQ-0014	2	2-41	ZS484918	Screw, pan head 2×8		2
2-18	ZW391397	'E' Ring 1.2M	6-1-9	2	2-42	ZW318014	Washer (BSP) D2.6×4.5×0.4t		2
2-19	EA219600	Relay P.C Board	CQ-0015	1	2-43	ZS572804	Screw, pan head 2×10		2
2-20	TC293174	Relay Mt. Base	CQ-0022	1	2-44	HZ268896	Head Up and Down Bracket		
2-21	ZS417161	Screw, pan head 2.3x4		2	1		(2) Part CQ	CQ-0005	1
2-22	TC268885	Sub Frame Part CQ	CQ 0003	1	2-45	ML216371	Head Adjust Lever 2	CQ 0007	1
2-23	MS645153	Ball Guide	CA-2013	3	2-46	ZG230051	Stop Spring	CQ-2046	1
2-24	ZS379350	Screw, pan head 3x6		6	2-47	ZS422076	Screw, pan head 3x5		1
2-25	MV250920	Steel Ball D2.38		3	2-48	ZG230692	Head Spring	CQ 0016	1
2-26	TC268874	Playslide Part CQ	CQ-0011	1					

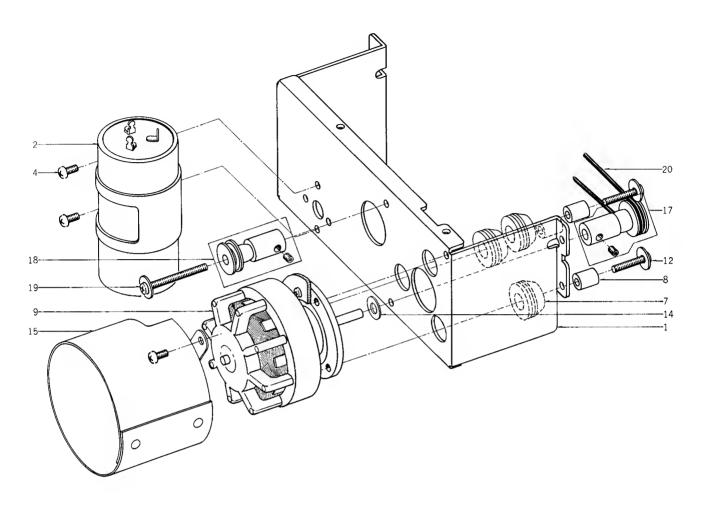
#### 3. ILLUSTRATION OF REEL TABLE BLOCK



#### 3) REEL TABLE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
3-1	BR211702	Supply Reel Table Block		
		Comp.	CW 9802	1
3-2	BR211691	Take-up Reel Table Block		
		Comp.	CG 9801	1

#### 4. ILLUSTRATION OF MOTOR BASE BLOCK



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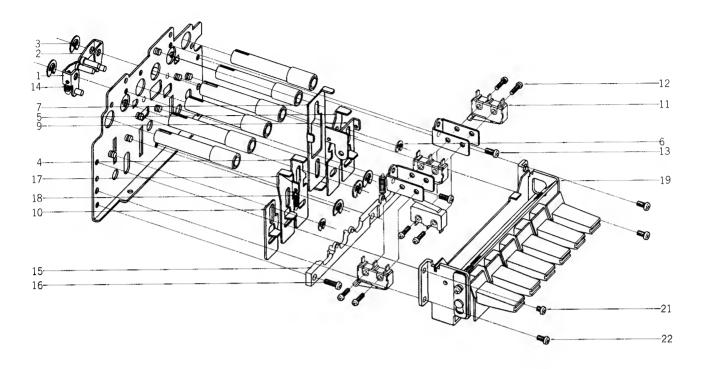
Mob: 098-788-319

rtv-servis-horvat@os.tel.hr

#### 4) MOTOR BASE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
4-1	MZ219510	Motor Mt. Base	CQ-7001	1
4-2	EC641338	MP/C. (Lug Type UNI/D.)		
		7+1 µF 150WV AC	24-9-95	1
4-3x	EC641340	MP/C. (Lug Type UNI/D.)		
		7µF 150WV AC (CSA)	24-9-101	1
4-4	ZS325495	Tapping Screw #2, 3x6 (BR)		4
4-5x	ZW562476	Earth Lug M3		2
4-6x	ZS455207	Tapping Screw #2, 3×5 (BR)		1
4-7	TC384164	Rubber Cushion Bush	24XO-717	3
4-8	MZ646290	Spacer 3×8.5	7-2-6	3
4-9	BM571904	Motor (HM1-12CS)		
		Block Comp. GXC-75D		1
4-10x	EZ638965	Cord Support	2 7 50	1
4-11x	ZS379350	Screw, pan head 3x6		
		(CEE, CSA)		1
4-12	ZS290496	Screw, pan head 3×15 (W=10)		2
4-13x	ZS422965	Screw, pan head 3x15		1
4-14	ZW479294	Washer (SUP) D4.2×10×0.8t		1
4-15	TC642385	Motor Shield GXC-710D	CA-7005	1
4-16x	TC394075	Oil Cut	CS-7028	1
4-17	MR281845	Motor Pulley (A) Part		
		GXC-730D	CQ 7002	1
4-18	MR281834	Motor Pulley (B) Part		
		GXC-730D	CQ-7003	1
4-19	ZS608354	Screw, pan head 3×30		1
		· -		
4-20	MB666123	Drive Belt	CA 1100	1

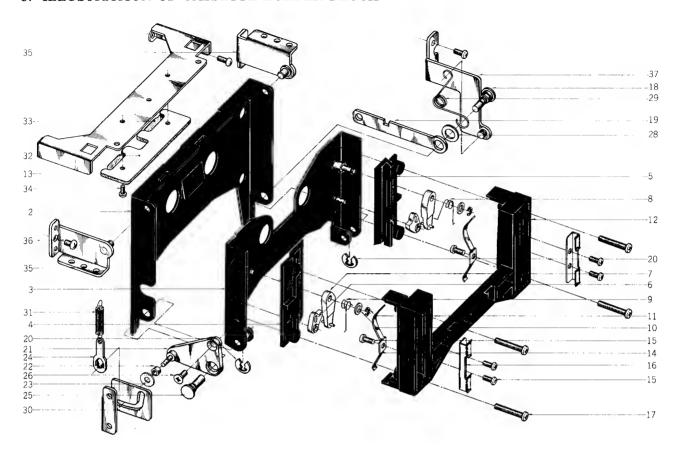
## 5. ILLUSTRATION OF SUB CHASSIS BLOCK



## 5) SUB CHASSIS BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
5-1	ML268918	Lock Lever (A) Part CQ	CQ-2041	1
5-2	ML268920	Lock Lever (B) Part CQ	CQ-2041	1
5-3	ZW290283	'U' Ring 2.85M	6-1-1	4
5-4	MZ218586	Play Slider A	CQ-2037	1
5-5	MZ218621	Play Slider B	CQ-2037	1
5-6	ZW270101	'E' Ring 3M	6-19	4
5-7	TC268841	Stop Slider Part CQ	CQ-2036	1
5-8	ZG387178	1dler Tension Spring	CS-1106	1
5-9	TC642161	Inter Lock Slide	CA-2033	1
5-10	MZ218711	Inter Lock Slide	CQ-2042	1
5-11	ES494188	Micro SW. SS-5GL-13	25-1-25	4
5-12	ZS391522	Screw, pan head 2.3×8		8
5-13	ZS325495	Tapping Screw #2 3x6 (BR)		2
5-14	ZG456120	Setting Lever Spring	CS-1187	2
5-15	MS645175	Slider Guide	CA-2035	1
5-16	ZS666336	Tapping Screw #2, 3×8 (PAN)		3
5-17	MZ218643	RWD Slide 1	CQ-2038	1
5-18	ZG422223	Return Spring	PX-A132	1
5-19	BK218812	Keyboard SW. Comp. CQ	CQ-2045	1
5-20 x		Screw, pan head 3x12		1
5-21	ZS417216	Screw, pan head 3×4		2
5-22	ZS379350	Screw, pan head 3×6		2

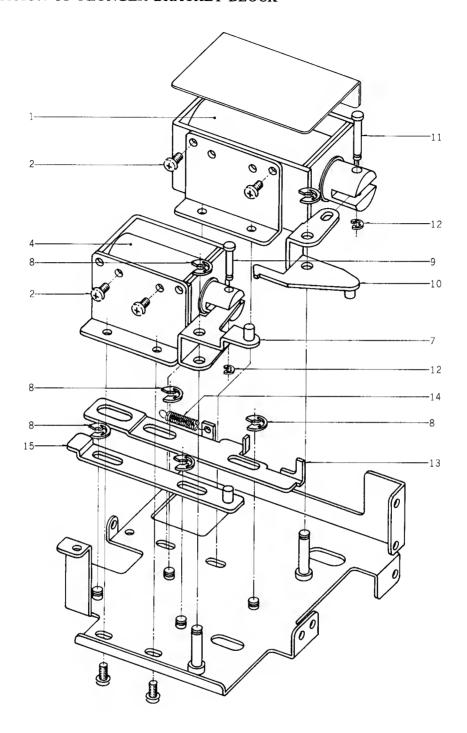
## 6. ILLUSTRATION OF CASSETTE HOLDER BLOCK



#### 6) CASSETTE HOLDER BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty		Ref. No.	Parts No.	Description	Schematic No.	Q'ty
	CASSETTE	HOLDER BLOCK				6-21	ML204862	Eject Guide Arm A Part CB	CA-2027	1
6-1 x	BZ211860	Cassette Holder Block Comp.	CB-2046	1		6-22	MR203804	Roller	CB-1056	1
6-2	TC685260	Trap Part CA	CA-2020	1		6-23	ZW259503	Washer (Nylon) D3.1×8×0.5t		1
6-3	TC646920	Cassette Rack CA	CA-2023	1		6-24	TC203815	Spring Hook	CB-1057	1
6-4	MS595563	Cassette Guide L	CH-2007	1		6-25	MH644916	Hinge Pin	CA-2028	1
6-5	MS595552	Cassette Guide R	CH-2006	1		6-26	ZS414033	Screw, countersunk head 3x8		1
6-6	,ML595574	Detector Lever A	CH-2008	2		6-27x	ZG227452	Spring D	900-118	1
6-,7	ML595585	Cassette Lever B	CH-2009	2		6-28x	ZW322110	Washer (Nylon)		
6-8	ZG595618	Spring A	CH-2004	1				D6.1×10.3×1.0t		1
6-ĝ	ZG595620	Spring B	CH-2005	1		6-29	ZG218790	Click Spring B	CQ-2044	1
6-10	ZW592391	Washer (PBP) D3.2×6×0.3t		2		6-30	MS218114	Eject Guide	CQ-2024	1
6-11	ZW270088	'E' Ring 1.9M	6-1-9	2		6-31	ZG365321	Idler Lever Spring	RCC-1385	1
6-12	TC647065	Cassette Case	CA-2024	1						
6-13	TC645186	Reflector	CA-2071	1			LAMP STA	ND BLOCK		
6-14	ZG207257	Sheet Spring	CI-2019	1		6-32	EA234246	Lamp P.C Board	CQ-1076	1
6-15	ZS669104	Tapping Screw #2, 2.3x6			ı	6-33	EL295312	Lamp (L/T) 8V 0.2A	28-2-8	2
		(PAN)		6		6-34	ZS417161	Screw, pan head 2.3x4		2
6-16	TC642148	Lid Chuck	CA-2026	2						
6-17	ZS592402	Screw, pan head 3x18		4						
6-18	MH664064	Hinge Pin B	CB-2029	1	1	6-35	TC684360	Pin Stand Part CA	CA-1099	2
6-19	TC666156	Band Plate B	CB-2024	1		6-36	ZS325495	Tapping Screw #2, 3×6 (BR)		2
6-20	ZW290283	'U' Ring 2.85M	6-1-1	2	1	6-37	TC280664	Spring Base Part CQ	CQ-1067	1

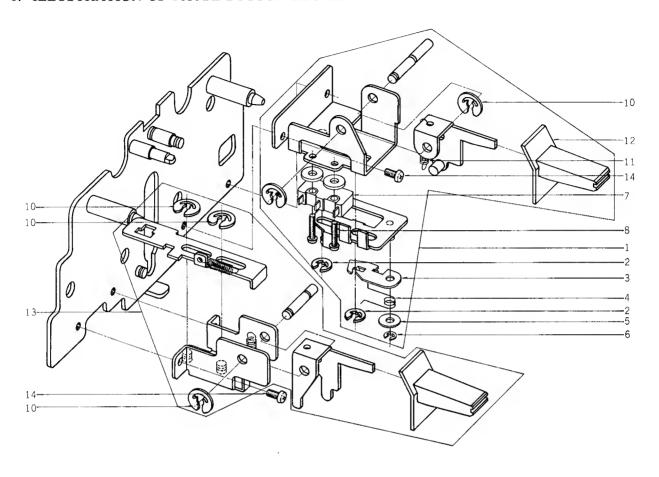
## 7. ILLUSTRATION OF PLUNGER BRACKET BLOCK



#### 7) PLUNGER BRACKET BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
7-1	EP638706	Plunger Solenoid 1660PHT	44-1-74	1	7-8	ZW290283	'U' Ring 2.85M	6-1-1	6
7-2	ZS323728	Screw, binding head 3x5		4	7-9	MH257477	Connecting Pin	RD-211	1
7-3	ZS422076	Screw, pan head 3x5		4	7-10	ML268727	Drive Lever Part CQ	CQ-2016	1
7-4	EP638695	Plunger Solenoid 1240PHT	44-1-73	1	7-11	MH533913	Connecting Pin	TW-2010	1
7-5 x	EP263136	Plunger Solenoid 1240PHT14			7-12	ZW270088	'E' Ring 1.9M	6-1-9	2
		(CEE)	44-1-86	1	7-13	MZ218057	REC Joint Slide	CQ-2019	1
7-6 x	ED224550	Silicon Diode 10D4	45-2-16	2	7-14	ZG365321	Idler Lever Spring	RCC-1385	1
7-7	ML268762	Plunger Lever (1) Part CQ	CQ-2015	1	7-15	ML268773	Reverse Joint Lever Part CQ	CO-2018	1

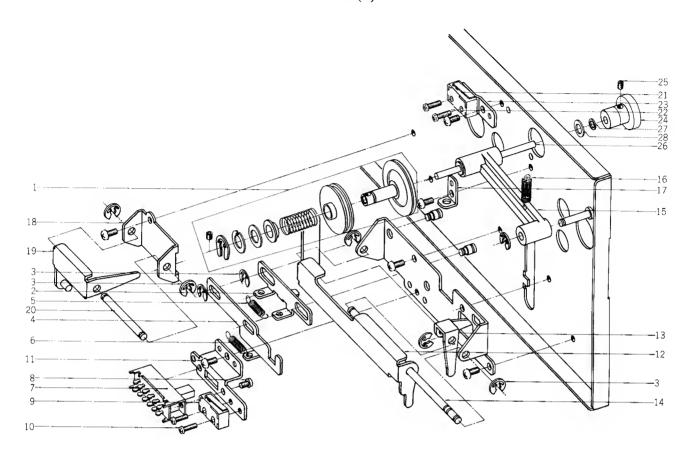
## 8. ILLUSTRATION OF PAUSE BUTTON BLOCK



#### 8) PAUSE BUTTON BLOCK

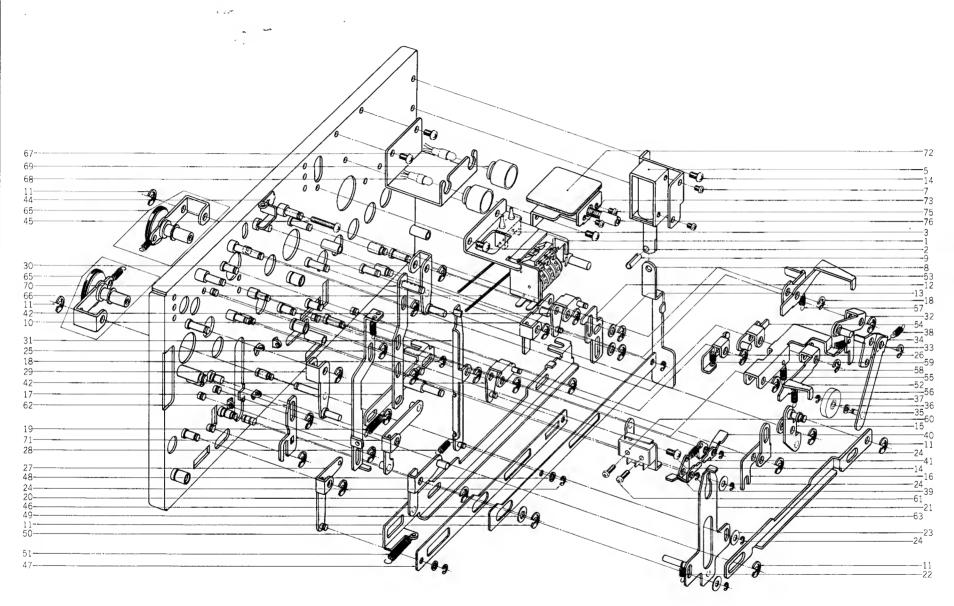
Ref. No.	Parts No.	Description	Schematic No.	Q'ty
8-1	BZ211904	Pause Button Block Comp.	CQ-9713	1
8-2	ZW270101	'E' Ring 3M	6-1-9	2
8-3	TC515575	SW, Lock Cam B	CG 2301	1
8-4	ZG514440	Button Lock Spring B	CG-2303	1
8-5	ZW302332	Washer (BSP) D3.1×8×0.5t		1
8-6	ZW270088	'E' Ring 1.9M	6-1-9	1
8-7	ES494188	Micro SW. SS-5GL-13	25-1 25	1
8-8	ZS364397	Screw, pan head 2.3×10		2
8-9x	ZS462947	Screw, pan head 2.3×12		1
8-10	ZW290283	'U' Ring 2.85M	6-1 1	2
8-11	ZG577945	FF Slide Lever Spring	PW-1022	1
8-12	ML645377	Function Lever C	CA 2046	1
8-13	BZ211893	Eject Button Block Comp.	CQ 9703	1
8-14	ZS422076	Screw, pan head 3x5		2

## 9. ILLUSTRATION OF MECHA FRAME BLOCK (1)



#### 9) MECHA FRAME BLOCK (1)

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
9-1	BZ681568	Clutch Block Comp.	CA-1114	1
9-2	MZ217530	SW. Slide 1	CQ-1060	1
9-3	ZW290283	'U' Ring 2.85M	6-1-1	10
9-4	MZ217541	SW. Slide 2	CQ-1061	1
9-5	ZG230782	SW. Base Return Spring	CQ-1081	1
9-6	ZG262271	FF Return Spring	CQ-1089	1
9-7	ES488970	Slide SW, SL-242B4BF	25-3-76	1
9-8	ZS432843	Screw, pan head 2.6x4		2
9-9	ES477966	Micro SW. SS-5GL	25-1-23	1
9-10	ZS487091	Screw, pan head 2.3x8		2
9-11	ZS325495	Tapping Screw #2, 3x6 (BR)		2
9-12	ML269010	Eject Lever (2) Part CQ	CQ-1025	1
9-13	ML216810	Eject Lever 3	CQ-1026	1
9-14.	MS216821	Eject Shaft	CQ-1027	1
9-15	ML268931	Wheel Arm Part CQ	CQ-1078	1
9-16	ZG262585	Spring, wheel arm	CQ-1087	1
9-17	MZ217528	Spring Hanger	CQ-1059	1
9-18	MZ216707	Rec Bracket	CQ-1020	1
9-19	ML280653	REC Lever Part CQ	CQ-1021	1
9-20	MS216731	REC Shaft	CQ-1022	1
9-21	ES477966	Micro SW. SS-5GL	25-1-23	1
9-22	ZS487091	Screw, pan head 2.3x8		2
9-23	TC641880	REC SW. Table	CA-1074	1
9-24	M1678633	Driving Wheel (B)	CA-1209/12	210 1
9-25	ZS434160	Set Screw, hexagon socket		
		3x3 (Cup/p.)		1
9-26	MS644613	Drive Wheel Shaft	CA-1028	1
9-27	ZW484762	Washer (Teflon) D3.1x5x0.2t		6
9-28	MZ678508	Oil Cut	CA-1110	1



#### 10) MECHA FRAME BLOCK (2)

,		1		
Ref. No.	Parts No.	Description	Schematic No.	Q'ty
110.	COLUMBER	PL o CV	110.	
10.1	COUNTER		0.1.40	
10-1 10-2	MC213085 ZS422076	Counter SMP-390-73 Screw, pan head 3x5	9-1-48	1 2
10-3	ES516036	Lead SW. ORD-225	25-11 1	1
				-
	PLUNGER	BASE BLOCK		
10-4	MZ217574	Plunger Base	CQ-1063	1
10-5	EP494425	Plunger Solenoid 0730THT1	44-1-48	1
10-6x 10-7	ED494583 ZS592378	Silicon Diode 10D05 Screw, pan head 2.6x3	45-2-42	1
10-7	ML217552	Auto Stop Lever	CQ-1062	2 1
10-9	MH620572	Spring Pin	C4 1002	1
		RAME BLOCK		
10-10	ML268997	Cancellation Lever Part CQ	CQ-1042	1
10-11 10-12	ZW290283 ML217091	'U' Ring 2.85M	6-1-1	29
10-12	ZW649991	Play Stop Lever Washer (PBP) D4.1×7×0.3t	CQ 1043	1 2
10-14	ZS325495	Tapping Screw #2, 3×6(BR)		9
10-15	ML269021	Interlocking Lever (2)		
		Part CQ	CQ-1039	1
10-16	MZ216990	Interlock Plate 1	CQ-1038	1
10-17	TC268986	Direction Slide Part CQ	CQ-1037	1
10-18 1 <b>0-</b> 19	ZW2 70101 ZG288865	'E' Ring 3M Direction Spring	6-1-9	5
10-20	ML268975	Play Lever Part CO	CQ 1092 CQ-1046	1
10-21	TC268964	Brake Slide Part CQ	CQ 1047	1
10-22	ZG456120	Setting Lever Spring	CS-1187	1
10-23	ZW317171	Washer (PBP) D3.1×8×0.1t		3
10-24	ZW270088	'E' Ring 1.9M	6-1-9	10
10-25 10-26	MZ217473	RWD Slide	CQ-1054	1
10-26	ML641823 ML268953	RWD Lever RWD Lever (Q) Part CQ	CA-1066 CA-1067	1
10-28	ZG286918	FF Joint Spring	CQ-1090	2
10-29	ML268942	Idler Lever Part CQ	CQ-1055	1
10-30	ML301318	Idler Lever (B) Part CQ	CQ-1055	1
10-31	ML280596	FF Joint Lever Part CQ	CQ-1052	1
10-32	ML221220	FF Lever Part CA	CA-1056	1
10-33 10-34	ZG469315	Take-up Lever Spring	CG-1091	1
10-34	ML684573 ZW645952	FF Wind Arm Part CA Washer (Teflon) D2.1x4x0.2t	CA-1060	1 2
10-36	MI644804	FW Wheel CA	CA-1063	1
10-37	ZW356657	'E' Ring 1.5M	6-1-9	î
10-38	ZG385986	Safety Lever Return Spring	CS-2539	1
10-39	ML217170	Brake Lever A	CQ-1049	1
10-40	ML217181	Brake Lever B	CQ 1049	1
10-41	ZG580263	Lock Plate B Spring	TD-2016	1
10-42 10-43x	ML269818 ZW259885	Joint Arm Part CQ Washer (PBP)	CQ-1050	2
10 45%	211237003	D5.1×10.3×0.1t		1
10-44	TC641801	Wind Lever Resetter	CA-1064	1
10-45	ZS462802	Tapping Screw #2, 3×15		
		(BR)		1
10-46	MZ217236	FF Connecting Plate	CQ-1051	1
10-47 10-48	MZ217416	RWD Connecting Plate	CQ-1053	1
10-48 10-49 -#	ZW407362 ZW420682	Washer (Nylon) D3.1x5x1t Washer (Nylon) D4.2x9x0.5t		2
10-50	MZ217135	Play Connection Plate	CQ-1045	1 1
10-51	ZG644848	PR Spring	CA-1081	1
10-52	ML216922	Detector Lever 1	CQ-1031	1
10-53	ML216933	Detector Lever 2	CQ-1032	1
10-54	ML280675	Holder Lever Part CQ	CQ-1033	1
10-55	MZ216955	Cassette Holder	CQ-1034	1
10-56 10-57	ZG365433 ZG230782	Idler Tension Spring	RCC-1365	1
10-57	ZG230782 ZG262282	SW. Base Return Spring Spring, holder	CQ-1081 CQ-1086	1 1
10-59	ZG392848	Operation Lever Spring	CQ-1086 CS-2102	1
10-60	ES477966	Micro SW. SS-5GL	25-1-23	1
10-61	ZS487091	Screw, pan head 2.3×8	. 23	2
10-62	MZ216843	Eject Slide 2	CQ-1028	1
10-63	MZ217078	Idler Changing Lever	CQ-1041	1
10-64x 10-65	ZW416698 BL211713	Nut M4		2
10-03	בון ווייחה	Take-up Lever Block Comp.	CG-1844	2
		UQ.	1011	-

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
10-66	MB217787	Counter Belt	CQ 1075	1
10-67	EL231265	Lamp (Cord Type)		
		24V 35 mA (200/150mm)	28-2-42	1
10-68	EL231254	Lamp (Cord Type)		
		24V 35mA (220mmx2)	28-2-42	1
10-69	MZ217675	Lamp Holder C	CQ-1066	2
10-70	TC280620	Eject Connection Plate Part		
		CQ	CQ-1030	1
10-71	ML280631	Eject Arm Part CQ	CQ-1029	1
	MEMORY S	SW. P.C BOARD BLOCK		
10-72	BA211803	Memory SW. P.C Board		
		Comp.	CQ-9754	1
10-73	ES558944	Push SW. SPJ-10110	25 5-109	1
10-74x	ET635231	Transistor 2SC536 (F) (G)	45-1-55	1
10-75	ZS460440	Screw, pan head 2x4		2
10-76	SZ645221	Memory Cap CA	CA-6010	1

# RTV servis Horvat

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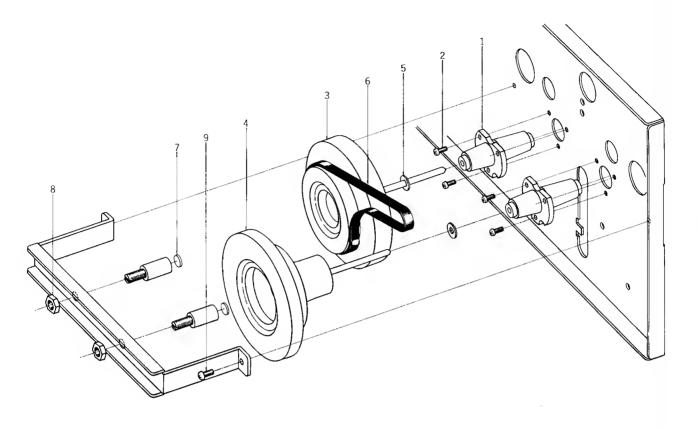
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## 11. ILLUSTRATION OF MECHA FRAME BLOCK (3)



## 11) MECHA FRAME BLOCK (3)

Ref. No.	Parts No.	Description	S chematic No.	Q'ty
11-1	MZ674616	Capstan Metal Case Part CA	CA-1041	2
11-2	ZS499331	Screw, pan head 2.3x5		6
11-3	MI217754	Flywheel A CQ	CQ-1072	1
11-4	M1217765	Flywheel B CQ	CQ-1073	1
11-5	ZW301751	Thrust Washer (Nylon)	CQ-1099	2
11-6	MB217776	Capstan Belt	CQ-1074	1
11-7	TC653220	Capstan Shaft Holder	CH-1079	1
11-8	ZW668452	Metal Nut	7-1-64	2
11-9	ZS325495	Tapping Screw #2, 3x6(BR)		2

#### 12. P.C BOARDS

## (1) PRE AMP P.C BOARD (CQ-5015) BLOCK

# (2) OSC, POWER SUPPLY P.C BOARD (CQ-5011) BLOCK

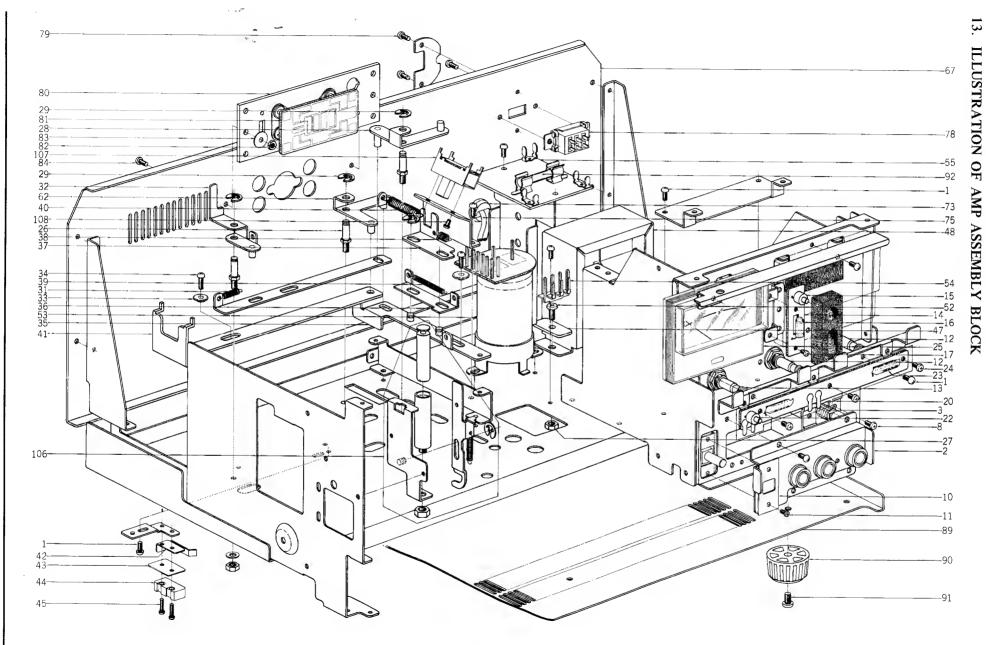
(1) 1 102	(1) The fam 1.0 bothle (eQ 5013) block								
Symbol No.	Parts No.	Description	Schematic No.	Q'ty	Symbol No.	Parts No.	Description	Schematic Q	't y
44.	D	n . nan .			(2)-1	BA211994	Osc, Power Supply		
(1)-1	BA211972	Pre Amp P.C Board	00.0051	1			P.C Board Comp.		
		Comp. (CQ-5015)	CQ-9851				(CQ-5011)	CQ-9751A/B	1
(1) 101	F74.2.2.4.2	TO NITTON	AtoD	1	(2)-2	BA235552	Osc, Power Supply		
(1)-IC1	EI605013	IC NE545B	45-8-117	2			P.C Board Comp.		
(1)-TR1to3	ET391768	Transistor					(CQ-5011) (CEE)	CQ-9751A/B	1
		2SC458LG(C)(D)	45-1-29	6	(2)-3	BA235563	Osc, Power Supply		
(1)-TR4	ET403402	Transistor 2SC536(G)	45-1-55	2			P.C Board Comp.		
(1)-TR5to9	ET635231	Transistor		1			(CQ-5011) (CSA)	CQ 9751A/B	1
		2SC536(F)(G)	45-1-55	10	(2)-4	BA235574	Osc, Power Supply		
(1)-TR10,11		Transistor 2SC945L(P)	45-1-85	2			P.C Board Comp.		
(1)-D1to3	ED219464	Germanium Diode					(CQ-5011) (JPN)	CQ-9751A/B	1
		1N34A	45-3-1	6	(2)-TR1,2	ET622080	Transistor		
(1)-D4to12	ED560913	Silicon Diode					2SC1175(E)(F)	45 1-195	2
		1S2473VE	45-3-23	18	(2)-TR3	ET537300	Transistor		
(1)-FL1	ER669734	MPX Filter FB1801M	53-1-104	2			2SD361(D)(E)	45-1-143	1
(1)-T1	BT490702	Headphone Trans.		1	(2)-TR4	ET399870	Transistor 2SC711(G)	45-1-67	1
		N19-349S	38-2-32	2	(2)-L1	EO682367	Ferri Inductor		
(1)-VR1	EV464196	Semi-fixed/Vol.		1			FS1215S-471JR20	23-1-253	1
		V8K4-1 2 kB	36-10-266	2	(2)-VR1,2	EV550023	Semi-fixed/Vol.		
(1)-VR2	EV522797	Semi-fixed/Vol.					V10K8-4-2 100 kB	36-10-250	2
		V8K4-1 20 kB	36-10-266	2	(2)-VR3	EV560103	Semi-fixed/Vol.		
(1)-VR3	EV464196	Semi-fixed/Vol.					V10K8-4-2 100ohmsB	36-10-250	1
		V8K4-1 2 kB	36-10-266	2	(2)-T1	EO620482	OSC Coil OT-925	23-4-31	1
(1)-VR4	EV497698	Semi-fixed/Vol.			(2)-RL1 to3	EP616500	Relay LC1-C-JT		
		V10K8-1-5			•		DC24V	47-1-22	3
4		20 kB (4US)	36-10-252	2	(2)-CR1to4	ER376435	Spark Quencher U/L		
(1)- <b>L</b> 1	EO368403	Ferri Inductor		- !	` ,		0.1µ+120 ohms		
		FL9H 33MH(J)	23-1-4	2			250WV	41-1-35	4
(1)-L2,3	EO663748	Inductor RCP-095		F	(2)-D1to4	ED494583	Silicon Diode 10D05	45 2 42	4
		36MH(J)	23-1-245	4	(2)-D5	ED511918	Zener Diode WZ-240	45-6-67	1
(1)-SW1	ES494076	Slide SW. CL-109B	25-3-78	2	(2)-D6to10	ED560913	Silicon Diode		
(1)-SW2	ES494302	Slide SW. CL104B	25-3-79	1	( )		1S2473VE	45-3-23	5
(1)-R60	ER658034	Metal Oxide Film/R.			(2)-D11to14	ED224550	Silicon Diode 10D4	45-2-16	4
		2W 220 ohms(J)	35-15-18	1	(2)TH1	ED560147	Thermister (Special)		
(1)-C3	EC516723	Styrol/C. (Vert. Type)			, -		100PD-81 B9220	45-14-2	1
		270PF(K) 50WV	24-11-3	2	(2)-R5	ER266433	Fuse/R.		_
(1)-C4	EC516767	Styrol/C. (Vert. Type)		l	(-)		FRN30MA68 ohms(K)	35-14-16	1
		470PF(K) 50WV	24-11-3	2	(2)-R6	ER266444	Metal Oxide Film/R.		-
(1)-C15	EC619650	Solid Aluminum/C.			(-)		3W 200 ohms(J)	35-15-19	1
		(Vert. Type)			(2)-R14	ER563253	Cement/R.		-
		$0.1\mu F(K) 25WV$	24-19-2	2	(-,		(Wire-wound Type)		
(1)-C26	EC619650	Solid Aluminum/C.		1			3W 2.2 ohms(K)	35-16-2	1
		(Vert. Type)		1	(2)-C1,2	EC289451	Styrol/C. (w/rubber)		•
		$0.1\mu F(K) 25WV$	24-19-2	2	(-),-		100PF(J) 50WV	24-11-13	2
(1)-C27	EC604102	Solid Aluminum/C.			(2)-C3	EC520468	Styrol/C. (Tub. Type)	2	-
*		(Vert. Type)		1	(2) 00	230020100	3300PF(J) 500WV	24-11-10	1
		$0.33 \mu F(K) 25WV$	24-19-2	2	(2)-C12,13	EC242730	Metalized Film/C.		•
(1)-C35	EC487157	NP/C. (Vert. Type)			(-) -1-,12		0.1μF 220WV		
		$0.47\mu F(M)$ 50WV	24-17-17	2			(Vert. Type)	24-16-9	2
					(2)-5	ZS421806	Screw, pan head 3x8		1
					(2)-6	ZW516611	Nut M3		1
					(2)-7	ZS558101	Screw, pan head 3x6		-
1					. ,		w/washer		1
					(2)-8	ZS422076	Screw, pan head 3x5		1
* .									

# (3) REVERSE MODE P.C BOARD (CQ-5023) BLOCK

Symbol No.	Parts No.	Description	Schematic No.	Q'ty
(3)-1	BA212040	Reverse Mode P.C Board Comp.		
		(CO-5023)	CQ-9756	1
(3)-SW1	ES677305	Lever SW. SLE54305	25-12-24	1

## (4) SYS. CON P.C BOARD (CQ-2001) BLOCK

Symbol No.	Parts No.	Description	Schematic No.	Q'ty
(4)-1	BA211768	Sys. Con P.C Board		
		Comp. (CQ-2001)	CQ-9752	1
(4)-TR1to3	ET635231	Transistor		
		2SC536(F)(G)	45-1-55	3
(4)-TR4	ET375603	Transistor		
		2SC1061(B)(C)	45-1-96	1
(4)-TR5	ET635231	Transistor		
		2SC536(F)(G)	45-1-55	1
(4)-TR6	ET666404	Transistor		
		2SD571(K)(L)	45-1-218	1
(4)-TR7	ET635231	Transistor		
		2SC536(F)(G)	45-1-55	1
(4)-TR8	ET666404	Transistor		
		2SD571(K)(L)	45-1-218	1
(4)-TR9to14	ET635231	Transistor		
		2SC536(F)(G)	45-1-55	6
(4)-D1 to 34	ED560913	Silicon Diode		
		1S2473VE	45-3-23	34
(4)-C1	EC516712	Styrol/C. (Vert. Type)		
		220PF(K) 50WV	24-11-3	1



#### 13) AMP ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No. Q	'ty
13-1	VU METER ZS325495	BASE BLOCK Tapping Screw #2, 3x6			13-57x	EJ232233	3P Fuse Holder (Small) (CEE, BEAB)	40 1 75	1
		(BR)	CO 0700	55	13-58 x	EJ232176	2P Fuse Holder (Large)	40 1 05	
13-2	EJ250751	Mic Jack Assy CQ	CQ-9722	1	13-59x	E7452410	CQ (CSA, AAL, JPN)	40 1 95	1
13-3	ES665875	Push SW. SDG-1P U/L	25 5 199	1	13-398	EZ652410	Fuse Holder 3P Table	40 1 60	1
13-4x	ES665807	Push SW, SDG-5P (CEE)	25-5-182	1	13-60	TC668024	(CSA, AAL, JPN) Fuse Base	40-1-68 CB 5017	1
13-5x	EC699298	PE-9P Film/C. $0.1\mu$ F(K)	24 2 8	,	13-60 13-61x	TC668024	Fuse Base (CEE, BEAB,	CB 5017	1
13-6x	EC <b>5</b> 65896	600WV Ceramic/C, DP6600YM	24 3-8	1			CSA, AAL, JPN)	CB 5017 CQ-5026	2
13.70	EC25(050	0.01μF(P) 1.4 kWV(CSA)	24-5-58	1	13-62 13-63x	ML281957 ZS379350	Rec Lever (2) Part CQ Screw, pan head 3x6	C-3020	1 2
13-7x	EC256950	MP/C. PEM271 0.01μF 250WV (CEE)	04.0.110	2	13-64x	ZW563218	Washer (Bake)		2
13-8	ZS379350	Screw, pan head 3x6	24-9-118	4	13.04%	211303210	D3.2x10x1t		3
13-9x	ZW562476	Earth Lug M3		1	13-65x	EZ300315	Trans. Shield (CEE, BEAB)	CO-5039	1
13-10	TC241424	Mask	CQ-5030	1	13-66x	EZ300553	P.C Board Barrier	04 0000	•
13-11	ZS432843	Screw, pan head 2.6×4	- q 0000	2	15 00%	1,2000000	(CEE, BEAB)	CQ-5041	1
13-12	EV691468	Vol. VJ10R670 50 kA	36-2-41	2	13-67	SP219025	Rear Panel A	CQ 5017	1
13-13	EV231017	Single axial 2 throw	00 2 11	2	13-68x	SP219023	Rear Panel B (CEE)	CQ 5017	1
13-13	E v 231017	Vol. GJ70R 526-10 kBx2	36-1-47	1	13-69x	SP288213	Rear Panel D (JPN)	CQ 5017 CQ-5017/5036	
13-14	E 4 2 2 4 1 9 0	LED P.C Board	CQ-5021	1	13-09x 13-70x		* *		
	EA234180					SP300260	Rear Panel F (CSA)	CQ 5016/5038	
13-15	ED656357	LED SEL-105R	45 15 11	1	13-71x	SP288202	Rear Panel C (AAL)	CQ-5017/5036	
13-16	EL603268	Lamp (L/T) 24V 35 mA	28 · 2 - 39	1	13-72 x	SP288224	Rear Panel E (BEAB)	CQ-5017/5037	
13-17	ZS417161	Screw, pan head 2.3x4	(10, 5000	2	13-73	EZ631945	Strain Relief SR-4N-4	2-7-49	1
13-18	TC219183	Shield Plate	CQ-5020	1	13-74x	EZ246936	Strain Relief (CEE)		
13-19x	ZW259424	Lug Plate, D6 wrapping	33-5 10	1			SR-6W-1	2-7-8	1
13-20	BA262383	Lamp P.C Board Assy CQ	CQ-9717	1	13-75	EW604618	AC Cord VM-0064		
13-21	EA234191	Lamp P.C Board B	CQ-5022	1			(U/T, CEE)	26 3 34	1
13-22	ED656346	LED 305GC	45 15 10	1	13-76x	EW516475	AC Cord (CSA, AAL)	26-3 20	1
13-23	EL295312	Lamp (L/T) 8V 0.2A	28-2-8	2	13-77x	EW557640	AC Cord 2.5M (JPN)	26 · 3 · 32	1
13-24	ZS422076	Screw, pan head 3×5		7	13-78	ES479485	Slide SW. S-1	25-3-66	1
13-25	EM234134	VU Meter KL-250L-10	46 1 138	2	13-79	ZS201150	Screw, truss head 3x6 (Black)		2
	AMP CHASS	SIS BLOCK			13-80	EJ624104	Jack Plate J-2	31 5-121	1
13-26	MS645017	Rec Lever Shaft	CA 5020	3	13-81	EA647313	Jack Plate P.C Board	LE-5626	1
13-27	ZW413267	Flange Nut M4		5	13-82	ZW273756	Nut M3, #1		2
13-28	ML281924	Reverse Change Lever (B)			13-83	ZW556828	Washer (SPC)		
		Part CQ	CQ 5008	1			D3.5×10×0.5t		2
13-29	ZW290283	'U' Ring 2.85M	6 1-1	5	13-84	ZS355522	Screw, pan head 3x6		2
13-30	MZ218902	Rev. Changing Slide	CQ 5006	1			•		
13-31	ZG470430	SST Spring B	RCC-1240	B 1		ASSEMBLY	BLOCK		
13-32	ML281935	Reverse Change Lever (A)			13-85x	ZS469710	MR Graduated Screw	MR-254	1
		Part CO	CQ 5007	1	13-86 x	ZS447761	Tapping Screw #2, 3×6		
13-33	ZW628288	Graduated Collar	LE-5602	6			(BR) (Black)		10
13-34	ZS447840	Tapping Screw #2, 3x8			13-87x	ZW553915	Washer D3.5×10x1t		3
		(BR)		2	13-88x	BA211746	SW. P.C Board Comp. CO	CQ-9760A/B	1
13-35	TC281946	Rec Slide (B) Part CQ	CQ-5004	1	13-89	SP219442	Bottom Plate	CQ 6007	1
13-36	MZ218867	Rec Slide	CQ-5002	1	13-90	SZ645243	Circular Foot A CA	CA 6014	4
13-37	MZ218891	Rec Slide C	CQ-5005	1	13-91	ZS417150	Screw, pan head 4x6		4
13-38	ZG525993	SW. Return Spring	CV 2060	1	13-92	EF590692	Fuse 1.2A 250V	39 1-50	1
13-39	ZG359515	FF Slide Lever Spring	PX 134	1	13-93x	EF601964	Fuse (SEMKO T Type)		
13-40	ZG369606	Field Lever Spring	RCC 110	1			1.6AT	39-1-53	1
13-41	MZ218878	Rec Slide A	CQ-5003	i	13-94x	EF602550	Fuse (SEMKO T Type)	***	•
13-42	EZ280765	Actuator	CQ-0021	1	10 / 1	23.002030	1.25AT 250V	39 1 53	1
13-43	EZ595653	Insulator Plate	CH-1055	1	13-95x	EF623103	Fuse (SEMKO T Type)	00 1 00	1
13-44	ES389700	Micro SW. SS-5	25-1-19	i	13-934	L1023103	1AT (CEE, BEAB)	39-1-53	1
13-45	ZS465298	Screw, pan head 2.3x10	20 1 15	2	13-96x	EF258344	Fuse (SEMKO T Type)	29.1-22	
13-46x	ZW562476	Earth Lug M3		1	13-90x	EF 250344		20 1 52	2
M*	EZ486617			1	12.07	EE//0524	800mAT (CEE, BEAB)	39-1-53	2
3-47	EZ40001/	Trans. Reinforcement	I E 1000	2	13-97x	EF662534	Fuse ULMF61M 250V	20.1.45	
	D.T.O. 2.0.0.0.4	Plate B	LF-5222	2		******	2.5A (CSA, AAL)	39-1-45	1
13-48	BT230984	Power Trans. CQT-1	38-4-427	1	13-98x	EF511626	Fuse ULMF61M 250V		
13-49 x	BT232165	Power Trans. CQT-3			_		0.8A (CSA, AAL)	39-1 45	1
		(CEE, BEAB)	<b>38 4-42</b> 9	1	13-99x	EF550618	Fuse ULMF61M 250V		
13-50x	BT232143	Power Trans. CQT-2					1.5A (CSA, AAL)	39-1-45	1
		(CSA, AAL, JPN)	38 4 428	1	13-100x	EF668610	Fuse ULMF61M 250V		
13-51x	EZ300552	Fuse Barrier					1.2A (CSA, AAL)	39-1-45	2
		(CSA, AAL, JPN)	CQ 5040	1	13-101x	EF562691	Fuse 2.5A 250V (JPN)	39-1-50	1
13-52	ZS413201	Screw, pan head 4x8		4	13-102x	EF575932	Fuse 0.8A 250V (JPN)	39-1 50	1
13-53	EC684472	Elect./C. (Wrapping Type)				EF563692	Fuse 1.5A 250V (JPN)	39-1-50	1
		330µF 160WV	24-10-108	1	1	EF590692	Fuse 1.2 A 250V (JPN)	39 1 50	2
13-54	EJ551035	Wrapping Terminal,		1		MZ284005	Barrier (AAL)	CQ-6016	1
		4P T-5251	32-1-36	1	13-106	BZ681941	Damper Block Comp. CB	CB-2045	1
13-55	EJ230995	1P Fuse Holder (Large) CQ	40-1-94	1	100	=======================================	The state of the s		•
13- <b>5</b> 6 x	EJ232187	2P Fuse Holder (Small)	** * ***	1	13-107	ES422414	Slide SW. SL-242 B4 BD	25-3 39	1
JUA	10202107	CQ (CEE, BEAB)	40 1 96	1	13-107	ZS432843	Screw, pan head 2.6x4	40 0 00	1 2
•		CQ (CEE, DEAD)	40 I JU	- 0	13-100	20432043	Below, pan neau 2.084		2

## 14. PHOTO OF FINAL ASSEMBLY BLOCK



#### 14) FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
14-1	BD211634	Operation Panel Block		
		Comp. CQ	CG-6829	1
14-2 x	ZS325495	Tapping Screw #2, 3x6(BR)		3
14-3	BD211645	Front Panel Block Comp. CQ	CQ-9715	1
14-4x	ZS447840	Tapping Screw #2, 3×8(BR)		8
14-5	BD681491	Lid Panel Block Comp.		
		CA2, CB	CB-6008	1
14-6	SB645232	Selector Button	CA-6011	6
14-7	SK631056	Single Knob CW	MY-6208	2
14-8	SK219497	Single Knob CQ	CQ-6009	1
14-9	BC219453	Wood Frame	CQ-6008	1
14-10	ZW548010	Spot Facing Washer	MU-6028	4
14.11	75510344	Screw binding head 4x12		4

#### 15. LIST OF INTERCHANGEABLE SEMICONDUCTORS

As far as service in concerned, in case the original parts cannot be obtained, the interchangeable parts listed below can be substituted.

	Original Parts	Interchanbeable Parts			
Description	Parts No.	Utilizing P.C Board	Description	Parts No.	
2SC458LG (C) (D)	ET391763	CQ-5015	2SC458 (C) 2SC693U (F)	ET329218 ET315472	
2SC711 (G)	CC711 (G) ET399870 CQ-5011		2SC945L (P) (Q) 2SC1647 (R) (S) (E)	ET639437 ET623733	
2SC945L (P) (Q)	ET639437	CQ-2001 CQ-2012 CQ-5015	2SC711 (E) (F) 2SC536 (F) (G)	ET453486 ET635231	
2SC1061 (B) (C)	ET375603	CQ-2001	2SD361 (D) (E) 2SC1449 (K) (L) (M)	ET537300 ET635815	
2SC1175 (E) (F)	ET622080	CQ-5011	2SC1211 (E) (F)	ET666393	
2SD361 (D) (E)	ET537300	CQ-5011	2SC1098 (L) (M)	ET476886	
2SD571 (K) (L)	ET666404	CQ-2001			
1N34A	ED219464	CQ-5015	1N60 1S188AM	ED428264 ED562386	
1S2473VE	ED560913	CQ-5015 CQ-5011 CQ-2001	1S2473 WG599	ED624903 ED514721	
10D05	ED494583	CQ-5011	1N4001	ED538615	
10D4	ED224550	CQ-5011	1N4004	ED570273	
WZ240	ED511918	CQ-5011	RD24A	ED229072	
SEL105R	ED650357				
SEL305GC	ED656346				
NE545B	E1605013				

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Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
BA211746 BA211768 BA211803 BA211972 BA211994 BA212040 BA235552 BA235563 BA235574 BA262383	13-88x (4)-1 10-72 (1)-1 (2)-1 (3)-1 (2)-2 (2)-3 (2)-4 13-20	EJ250751 EJ551035 EJ624104 EL231254 LL231265 EL295312 EL295312 EL603268 EM234134 EO368403	13-2 13-54 13-80 10-68 10-67 6-33 13-23 13-16 13-25 (1)-L1	HZ268896 HZ294524 HZ567202 HZ567213 MB217776 MB217787 MB666123 MC213085 MH257477 MH533913	2-44 2-33 2-5 2-39 11-6 10-66 4-20 10-1 7-9 7-11	MZ217530 MZ217541 MZ217574 MZ217675 MZ218057 MZ218586 MZ218621 MZ218643 MZ218711 MZ218867	9-2 9-4 10-4 10-69 7-13 5-4 5-5 5-17 5-10 13-36	ZG369606 ZG385986 ZG387178 ZG392848 ZG402895 ZG42223 ZG456120 ZG456120 ZG469315 ZG470430	13-40 10-38 5-8 10-59 2-40 5-18 5-14 10-22 10-33 13-31
BC219453 BD211634 BD211645 BD681491 BH286637 BK218812 BL211713 BM571904 BR211691 BR211702	14-9 14-1 14-3 14-5 2-1 x 5-19 10-6 5 4-9 3-2 3-1	EO620482 EO663748 EO682367 EP263136 EP494425 EP616500 EP638695 EP638706 ER266433 ER266444	(2)-T1 (1)-L2,3 (2)-L1 7-5x 10-5 (2)-RL1to3 7-4 7-1 (2)-R5 (2)-R6	MH620572 MH644916 MH664064 M1217754 M1217765 MI644804 M1678633 ML204862 ML216371 ML216393	10-9 6-25 6-18 11-3 11-4 10-36 9-24 6-21 2-45 2-15	MZ218878 MZ218891 MZ218902 MZ219510 MZ284005 MZ646290 MZ674616 MZ678508 SB645232 SK219497	13-41 13-37 13-30 4-1 13-105x 4-8 11-1 9-28 14-6 14-8	ZG514440 ZG525993 ZG577945 ZG580263 ZG595618 ZG595620 ZG644848 ZS201150 ZS201936 ZS290496	8-4 13-38 8-11 10-41 6-8 6-9 10-51 13-79 2-12 4-12
BT230984 BT232143 BT232165 BT490702 BZ211860 BZ211893 BZ211904 BZ681568 BZ681941 EA219600	13-48 13-50x 13-49x (1)-T1 6-1x 8-13 8-1 9-1 13-106 2-19	ER376435 ER563253 ER658034 ER669734 ES389700 ES422414 ES477966 ES477966 ES477966 ES477966	(2)-CR1to4 (2)-R14 (1)-R60 (1)-FL1 13-44 13-107 9-9 9-21 10-60 13-78	ML216810 ML216922 ML216933 ML217091 ML217170 ML217181 ML217552 ML221220 ML268727 ML268762	9-13 10-52 10-53 10-12 10-39 10-40 10-8 10-32 7-10 7-7	SK631056 SP219025 SP219036 SP219442 SP288202 SP288213 SP288224 SP300260 SZ645221 SZ645243	14-7 13-67 13-68x 13-89 13-71x 13-69x 13-72x 13-70x 10-76 13-90	ZS300626 ZS323728 ZS325495 ZS325495 ZS325495 ZS325495 ZS325495 ZS325495 ZS325495 ZS325495 ZS325495	2-30x 7-2 4-4 5-13 6-36 9-11 10-14 11-9 13-1 14-2x
EA234180 EA234191 EA234246 EA647313 EC242730 EC256950 EC289451 EC487157 EC516712 EC516723	13-14 13-21 6-32 13-81 (2)-C12,13 13-7x (2)-C1,2 (1)-C35 (4)-C1 (1)-C3	ES488970 ES494076 ES494188 ES494188 ES494302 ES516036 ES558944 ES665807 ES665875	9-7 (1)-SW1 5-11 8-7 (1)-SW2 10-3 10-73 13-4x 13-3 (3)-SW1	ML268773 ML268918 ML268920 ML268931 ML268942 ML268953 ML268975 ML2689010 ML269010	7-15 5-1 5-2 9-15 10-29 10-27 10-20 10-10 9-12	TC203815 TC216382 TC219183 TC241424 TC268841 TC268874 TC268885 TC268964 TC268986 TC280620	6-24 2-3 13-18 13-10 5-7 2-26 2-22 10-21 10-17	ZS355522 ZS356861 ZS364397 ZS375107 ZS379350 ZS379350 ZS379350 ZS379350 ZS379350 ZS379350 ZS379350	13-84 2-8 8-8 2-38 2-24 4-11x 5-22 13-8 13-63x 5-12
EC516767 EC520468 EC565896 EC604102 EC619650 EC619650 EC641338 EC641340 EC684472 EC699298	(1)-C4 (2)-C3 13-6x (1)-C27 (1)-C15 (1)-C26 4-2 4-3x 13-53 13-5x	ET375603 ET391768 ET399870 ET403402 ET537300 ET622080 ET635231 ET635231 ET635231	(4)-TR4 (1)-TR1to3 (2)-TR4 (1)-TR4 (2)-TR3 (2)-TR1,2 (1)-TR5to9 (4)-TR1to3 (4)-TR5 (4)-TR7	ML269818 ML280596 ML280631 ML280653 ML280675 ML281924 ML281935 ML281935 ML301318 ML595574	10-42 10-31 10-71 9-19 10-54 13-28 13-32 13-62 10-30 6-6	TC280664 TC281946 TC293174 TC384164 TC394075 TC515575 TC641880 TC642148 TC642161	6-37 13-35 2-20 4-7 4-16x 8-3 10-44 9-23 6-16 5-9	ZS399148 ZS413201 ZS414033 ZS417150 ZS417161 ZS417161 ZS417161 ZS417161 ZS417216 ZS417216	2-31 13-52 6-26 13-91 2-10x 2-21 6-34 13-17 5-21 5-20x
ED219464 ED224550 ED224550 ED494583 ED494583 ED511918 ED560913 ED560913 ED560913	(1)-D1to3 (2)-D11to14 7-6x (2)-D1to4 10-6x (2)-D5 (2)-TH1 (1)-D4to12 (2)-D6to10 (4)-D1to34	ET635231 ET635231 ET638504 ET666404 EV231017 EV464196 EV497698 EV497698	(4)-TR9to14 10-74x (1)-TR10,11 (4)-TR6 (4)-TR8 13-13 (1)-VR1 (1)-VR3 (1)-VR3 (1)-VR4 (1)-VR2	ML641823	6-7 10-26 8-12 2-37 10-34 2-14 6-22 4-18 4-17 9-20	TC642385 TC645186 TC646920 TC647065 TC653220 TC666156 TC668024 TC668024 TC684360 TC685260	4-15 6-13 6-3 6-12 11-7 6-19 13-60 13-61x 6-35 6-2	ZS421806 ZS422076 ZS422076 ZS422076 ZS422076 ZS422076 ZS422076 ZS422076 ZS422965 ZS432843 ZS432843	(2)-5 (2)-8 2-47 7-3x 8-14 10-2 13-24 4-13x 9-8 13-11
ED656346 ED656357 EF258344 EF511626 EF550618 EF562691 EF563692 EF575932 EF590692 EF590692	13-22 13-15 13-96x 13-98x 13-99x 13-101x 13-103x 13-102x 13-92 13-104x	EV550023 EV560103 EV691468 EW516475 EW557640 EW604618 EZ246936 EZ280765 EZ300315 EZ300552	(2)-VR1,2 (2)-VR3 13-12 13-76x 13-77x 13-75 13-74x 13-42 13-65x 13-51x	MS216821 MS218114 MS389981 MS595552 MS595563 MS644613 MS6445017 MS645175 MV250920	9-14 6-30 2-16 6-5 6-4 9-26 13-26 2-23 5-15 2-25	ZG207257 ZG216483 ZG216494 ZG218790 ZG227114 ZG227452 ZG230051 ZG230692 ZG230782 ZG230782	6-14 2-27 2-17 6-29 2-6 6-27x 2-46 2-48 9-5	ZS432843 ZS434160 ZS447761 ZS447840 ZS447840 ZS455207 ZS460440 ZS462802 ZS462947 ZS465298	13-108 9-25 13-86x 13-34 14-4x 4-6x 10-75 10-45 8-9x 13-45
EF601964 EF602550 EF623103 EF662534 EF668610 E1605013 EJ230995 EJ232176 EJ232187 EJ232233	13-95x 13-97x 13-100x (1)-IC1 13-55 13-58x 13-56x	EZ300553 EZ486617 EZ595653 EZ631945 EZ638965 EZ652410 EZ696431 HE636963 HP571983 HZ268784	13-66x 13-47 13-43 13-73 4-10x 13-59x 2-34 2-4 2-29 2-2	MZ216707 MZ216843 MZ216955 MZ216990 MZ217078 MZ217135 MZ217236 MZ217416 MZ217473 MZ217528	9-18 10-62 10-55 10-16 10-63 10-50 10-46 10-47 10-25 9-17	ZG262271 ZG262282 ZG262585 ZG286918 ZG288865 ZG300828 ZG359515 ZG365321 ZG365321 ZG365433	9-6 10-58 9-16 10-28 10-19 2-36 13-39 6-31 7-14 10-56	ZS469710 ZS477876 ZS484918 ZS487091 ZS487091 ZS487091 ZS49331 ZS510344 ZS558101 ZS572804	13-85x 2-9 2-41 9-10 9-22 10-61 11-2 14-11 (2)-7 2-43

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ZS592378 ZS592402 ZS608354 ZS666336 ZS669104 ZW259424 ZW259503 ZW259885 ZW270088 ZW270088	10-7 6-17 4-19 5-16 6-15 13-19x 6-23 10-43x 2-7 6-11								
ZW270088 ZW270088 ZW270088 ZW270101 ZW270101 ZW270101 ZW270101 ZW273756 ZW290283 ZW290283	7-12 8-6 10-24 2-32 5-6 8-2 10-18 13-82 2-11 5-3								
ZW290283 ZW290283 ZW290283 ZW290283 ZW290283 ZW290283 ZW301751 ZW302332 ZW317171 ZW318014	6-20 7-8 8-10 9-3 10-11 13-29 11-5 8-5 10-23 2-42								
ZW322110 ZW356657 ZW374545 ZW391397 ZW407362 ZW413267 ZW416698 ZW420682 ZW479294 ZW484762	6-28x 10-37 2-28 2-18 10-48 13-27 10-64x 10-49 4-14 9-27								
ZW516611 ZW548010 ZW553915 ZW556828 ZW562476 ZW562476 ZW562476 ZW563218 ZW567630 ZW567630	(2)-6 14-10 13-87x 13-83 4-5x 13-9x 13-46x 13-64x 2-35 6-10								
ZW628288 ZW645952 ZW649991 ZW668452 ZW699052	13-33 10-35 10-13 11-8 2-13								
3									

